mca
Malta Communications Authority

Interconnection Strategy for the Telecommunications Sector in Malta

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Consultative Paper

July 2004

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Executive Summary

The prime objective of this document is to outline the MCA's strategy with respect to interconnection services in Malta, while at the same time providing stakeholders with the opportunity to contribute in the shaping of this strategy. A critical component of this strategy is to bring local interconnection rates more closely in line with EU benchmarks for both fixed and mobile telephony.

In recent years, average interconnection rates in EU Member States have been experiencing a steady downward trajectory. This has been noted by the European Commission, which discontinued the publication of 'best current practice' fixed interconnection rates as benchmarks for National Regulatory Authorities. This consultation paper maps out short term and medium to long-term actions and regulatory initiatives, which should ultimately lead to reasonable downward adjustments to fixed and mobile interconnection rates.

In the short term, the MCA is considering a number of options applicable to both fixed and mobile telephony. These include benchmarking which is a practice that has been applied in other EU member states for both fixed and mobile interconnection and also the periodical review of the Weighted Average Cost of Capital (WACC) used for regulatory accounting purposes. Other measures (which are specific to fixed telephony) may include the removal of Maltacom's Access Deficit Charge which was a transitory measure acceded to by the MCA during the 2003 RIO review process.

In the longer term, the options available to the MCA include the formulation of a glide path for interconnection rates (for both fixed and mobile), the transition to a Current Cost Accounting (CCA) methodology and possibly the gradual transition to a Long Run Incremental Costing (LRIC) methodology.

This strategy is of particular relevance where cost-orientation obligations exist on SMP operators in accordance with the pertinent legislative framework. The applicability or otherwise of this strategy will therefore be equally valid under both the current regulatory framework as well as the new regulatory framework, subject to the results of the market analysis and imposition of remedies where the principle of cost-orientation is invoked.

1 Introduction

In May 2003 the Malta Communications Authority ("MCA") published its report on Consultation and Decision regarding "Interconnection in the Maltese Telecommunications Sector"[1]. The report summarised the MCA's assessment of the Reference Interconnect Offers (RIOs) submitted by Maltacom plc and Vodafone Malta Ltd following the conclusion of the consultative process initiated in January 2003. These Reference Interconnection Offers came into effect on 1 October 2003.

This consultation paper provides an outline of the MCA's proposed short and medium to long-term strategy in relation to the development of interconnection services in Malta (for fixed and mobile telephony) with a particular focus on cost orientation and the methodologies applicable in determining interconnection rates.

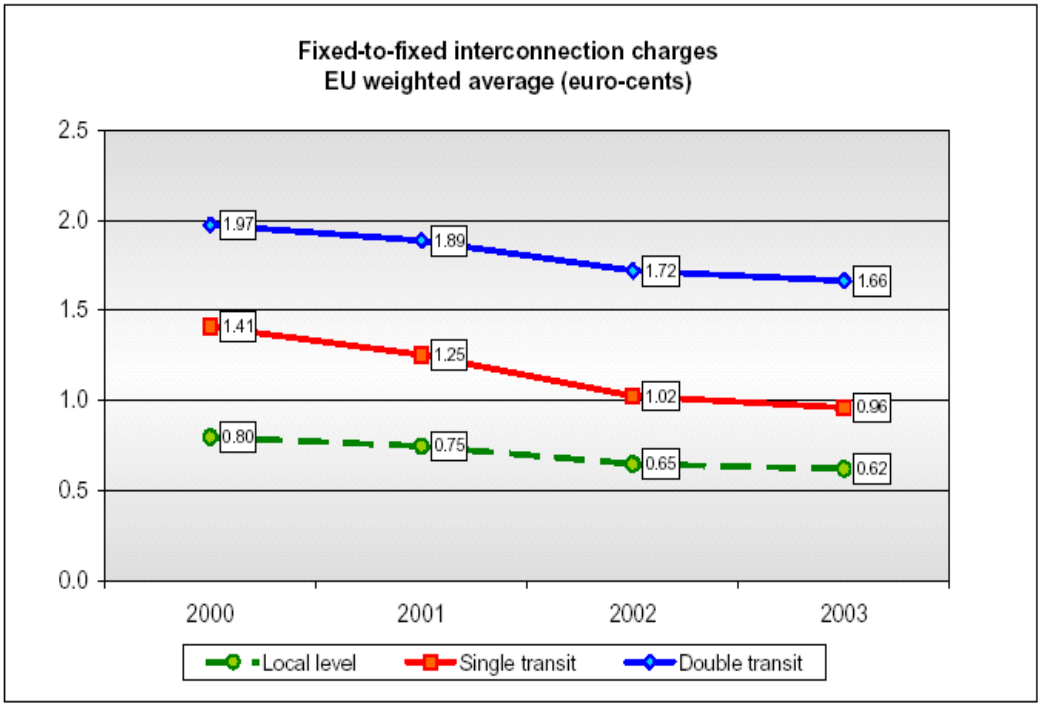
[1] "Interconnection in the Maltese Telecommunications Sector - Report on Consultation and Decision", MCA, May 2003.

2 Current Fixed Interconnect Benchmarks

2.1 Fixed Interconnection Rates in EU Member States

The chart below is extracted from the Ninth Report on the implementation of the telecommunications regulatory package published by the European Commission. It shows the weighted average fixed-to-fixed interconnection charges in EU member states over a three-year period up to August 2003. These charges are for local level, single transit and double transit. Since August 2000, the EU weighted average charge for call termination on fixed networks has decreased by 32% for single transit, by 22% for local level and by 16% for double transit. This trend is observed mostly up to August 2002, when the level of interconnection rates started stabilising.

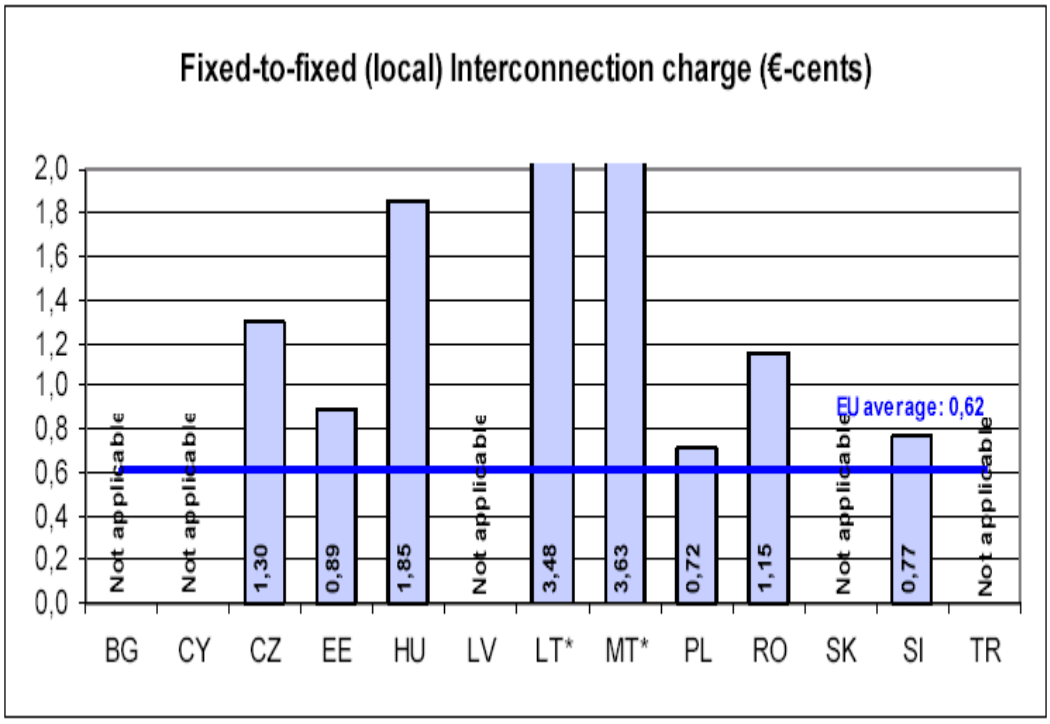
Chart 1: Fixed to Fixed Interconnection Charges at Local Level, Single Transit and Double Transit



2.2 Fixed Interconnection rates in the new EU Member states

The following two charts have been extracted from the Fourth Report on Monitoring of EU Candidate Countries – Telecommunications Services Sector. These charts indicate the per-minute interconnection charges for call termination on the incumbent's fixed network, based on a three-minute call at peak time. The average charge in EU member countries (taken from the EU's Ninth Implementation Report) is included in the form of a blue line.

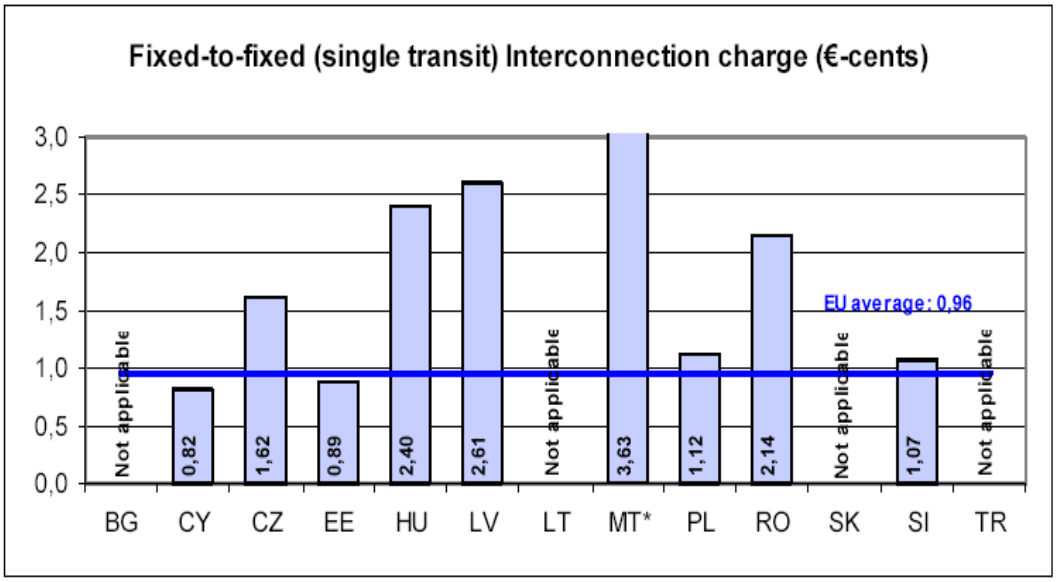
Chart 2: Fixed-to-Fixed interconnection charges for call termination on fixed network of incumbent operator – local level as at 30th June 2003.



*Out of scale.

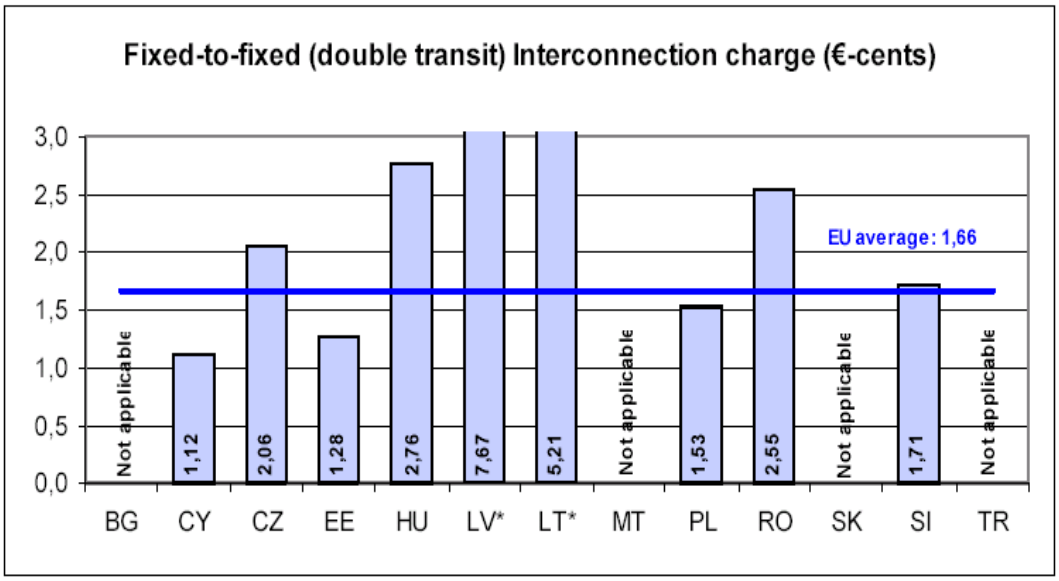
The chart above indicates that Malta has the highest local termination rate amongst the new EU accession states. This is mainly due to the fact that the interconnection rate offered by Maltacom covers National Termination as a whole, while these benchmarks apply to local, single and double transit separately.

Chart 3: Fixed-to-Fixed interconnection charges for call termination on fixed network of incumbent operator – single transit as at 30th June 2003.



*Out of scale.

Chart 4: Fixed-to-Fixed interconnection charges for call termination on fixed network of incumbent operator – double transit as at 30th June 2003.



3 Commentary on Maltacom's RIO

Maltacom's RIO includes a single national interconnection charge which does not distinguish between the different types of call termination (e.g. local, single transit etc.). The only distinction made concerns the time of the calls, which are classified into day, evening and weekend as follows:

	Interconnection Charge (€ cents per minute)			
	Day	**Evening**	**Weekend**	**Average**
National Termination[2]	**3.48**	**1.00**	**1.75**	**2.26**
Emergency Services	0.69	0.21	0.34	0.44
Directory[3] Services	3.70	1.06	1.86	2.39
Operator[3] Assistance	5.40	1.54	2.71	3.50

Note: Rate of exchange of € 2.30 to the LM

- Maltacom's approved RIO price list for national termination additionally includes an "access deficit contribution" (ADC) amounting to € cents 1.3,
- The approved price-list includes an interconnection charge for 'National Termination' as a whole and not at local, single and double transit levels,
- A further analysis of Maltacom's cost model shows that interconnection rates for local, single and double transit have been calculated as follows:

[2] Excluding an average access deficit charge of € 1.3 cents per minute.
[3] Not currently included separately in the RIO

	Interconnection Charge (€ cents per minute)[4]				Comparison with EU benchmarks
	Day	**Evening**	**Weekend**	**Average**	
National Termination	**3.48**	**1.00**	**1.75**	**2.26**	N/a
Local Termination	0.80	0.23	0.40	0.52	-16%
Single transit termination	2.48	0.71	1.25	1.61	+68%
Double transit termination	3.96	1.14	1.99	2.57	+55%

Note: Rate of exchange of € 2.30 to the LM

- Interconnection is available at Maltacom's secondary and tertiary interconnection nodes, as set out in Annex E of Maltacom's RIO (Birkirkara tandem, Marsa tandem, and Zejtun tandem and international gateways).

- The average national termination rate turns out to be high because the greatest proportion of the terminated calls are double transit (mostly international calls terminating on fixed), a relatively smaller percentage are single transit, and very few calls are local termination.

- The day/evening/weekend termination rates are based on retail price gradients which are based on average retail revenues. The low retail price for calls in the 18:00 to 06:00 time band has contributed to a steep gradient.

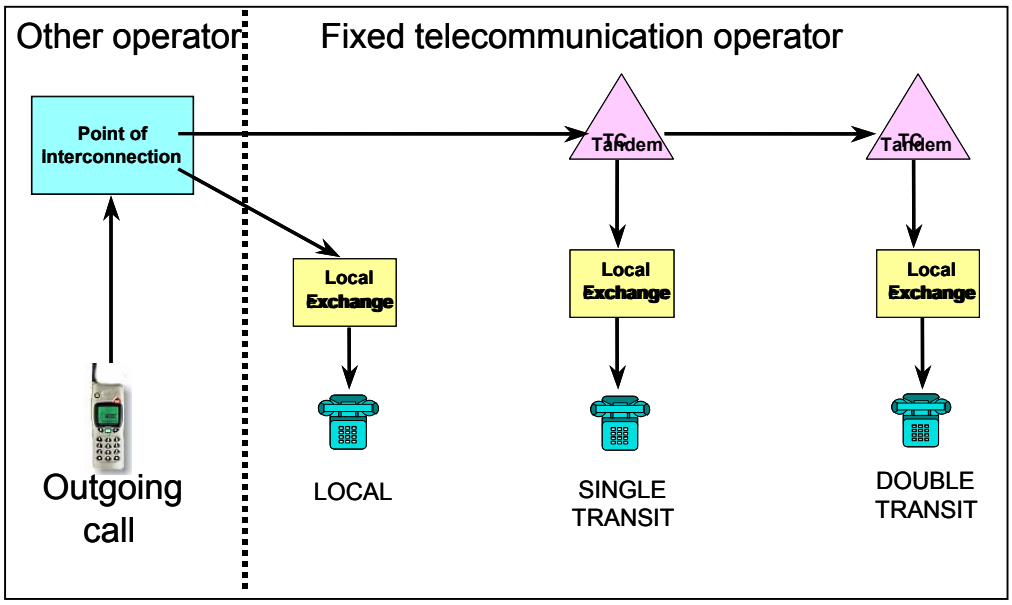
[4] Excluding an average access deficit charge of € 1.3 cents per minute.

4 Strategy for Fixed Interconnection

4.1 Short-term Strategy

1. There is a strong argument that the "Access Deficit Contribution" (ADC) should be removed in view of Maltacom still enjoying a "de facto" monopoly over the access network coupled with the high interconnection rates prevailing in the market. Such exceptionally high interconnection rates are hindering the development of competition in Malta. The ADC was accepted as a transitional mechanism (as sated in the MCA's May 2003 Decision Section 6.2.1) and the MCA has the right to remove the ADC charge in its 2004 RIO review.

2. Calls transferred for interconnection by another operator to a fixed network may traverse different nodes in the terminating network. Depending on the number of nodes traversed, calls may be classified as local, single transit or double transit as illustrated below:



Maltacom could be required to publish rates for local, single transit and double transit. This would immediately lead to a substantial improvement in the benchmarked rates as follows:

	Interconnection Charges in Euro Cents					
	EU	**Maltacom National (current)**		**Maltacom RIO Model**		
	Average	Average	Diff. EU average	Average	Diff. EU average	Rank in EU 15
National Termination						
Local termination	0.62	2.26	+264%	0.52	- 16%	3rd Lowest
Single transit termination	0.96	2.26	+135%	1.61	+68%	Highest
Double transit termination	1.66	2.26	+36%	2.57	+55%	4th highest

Note: Rate of exchange of € 2.30 to the LM

As can be seen from the table above, the rates for local and single transit would improve, while the rate for double transit increases slightly. This change would bring Maltacom's interconnection rates more reasonably in line with published benchmarks.

3. a. The publication of separate rates for local, single transit and double transit would inevitably be accompanied by the possibility of opening points of interconnection which enable local termination of traffic.

   b. It is assumed that interconnection traffic metering and billing for local, single transit and double transit calls will be feasible and practical.

4. The use of gradients, which are based on average retail revenues, may not guarantee the correct calculation of the time-of-day interconnection rates. An alternative might be to have one flat rate for the whole day.

5. The "Weighted Average Cost of Capital" (WACC) for Maltacom plc has been approved at 16.2% (pre-tax nominal), which was the highest rate out of a number of ranges. A reduction in the WACC may reduce interconnection rates depending on the extent of the adjustment. In this respect, a review will be carried to the WACC each year in order to have this reflective of current business environment and risk exposure.

6. If most EU fixed line operators can provide an equivalent interconnection service at a significantly lower cost, there should be a justifiable reason why Maltacom plc should be allowed to charge significantly more for interconnection services. In this respect, the concept of benchmarking can be applied in the interim with the objective of bringing interconnection rates more closely in line to EU benchmarks.

   Approaches to the use of benchmarks to set interconnection rates are described in further detail in Chapter 8.

4.2 Long-term Strategy

4.2.1 Formulation of a glide path for interconnection charges

A glide path is one method of achieving a competitive level of interconnection rates over a number of years.

This topic is covered in greater detail in Appendix 1 to this document.

4.2.2 Transition from Historic Cost Accounting (HCA) to Current Cost Accounting (CCA)

A transition to Current Cost Accounting (CCA) would necessitate Maltacom to restate its top-down model to MEA (Modern Equivalent Assets) by revaluing its assets, applying economic depreciation and restating OPEX to acceptable efficient MEA levels.

This topic is covered in greater detail in Appendix 2 of this document.

4.2.3 The use of bottom-up cost modelling by the MCA

The MCA has initiated the process leading to the development of its own bottom-up cost model on a scorched node basis. This topic is covered in greater detail in Appendix 3 to this document.

4.2.4 Benchmarking

A number of approaches in the use of benchmarks for determining interconnection rates are described in further detail in Chapter 8 of this document. The MCA would welcome comments and views on the feasibility of using benchmarks to determine interconnection rates in the short to medium term.

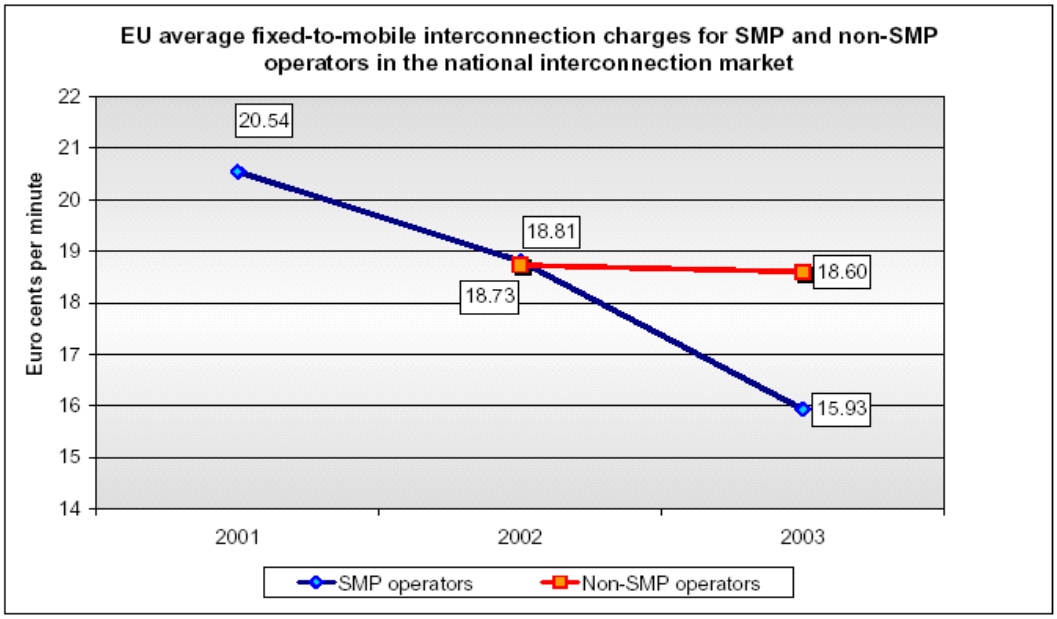
4.2.5 Transition to LRIC (Long Run Incremental Costing)

Should interconnection rates consistently remain significantly above EU averages, then a transition to LRIC may be considered in order to determine optimum rates looking forward.

5 Current Mobile Interconnect Benchmarks

5.1 Mobile Interconnection Rates in EU Member States

The chart below is extracted from the Ninth Report on the Implementation of the Telecommunications Regulatory package published by the European Commission. It indicates the weighted average fixed-to-mobile interconnection rates in EU member states over a two-year period up to August 2003. Charges are recorded for fixed-call termination on mobile networks having Significant Market Power (SMP), and non-SMP operators.



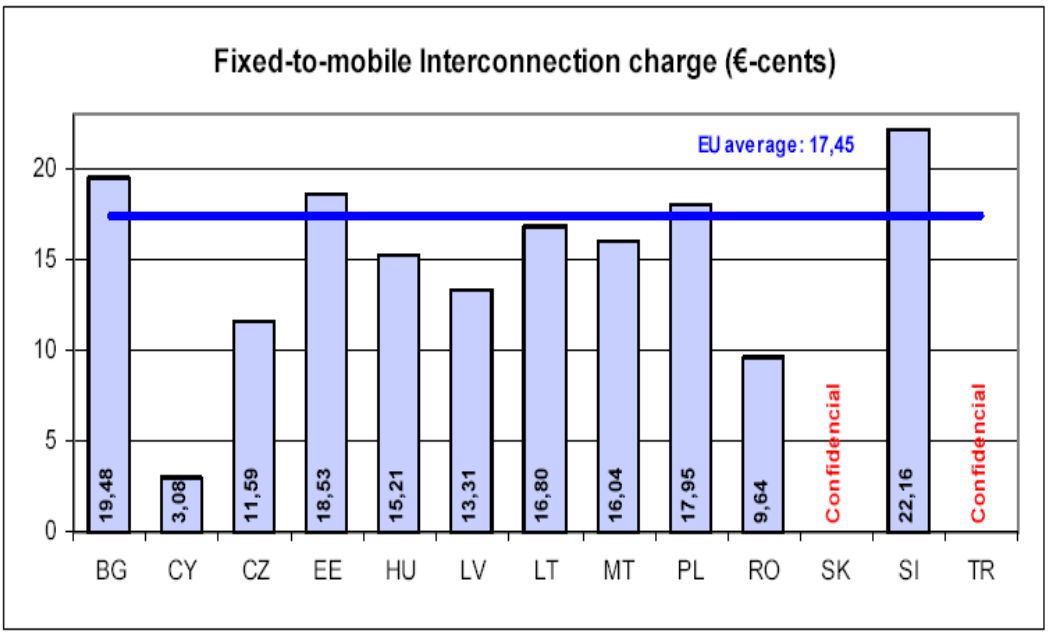
The EU weighted average interconnection charges by SMP operators decreased by 22 % in the period under review. This is mainly attributable to regulatory intervention by NRA's with regard to SMP operators (i.e. implantation of cost oriented charging).

For example in December 2003, the National Regulatory Authority of the Netherlands (OPTA) published a document regarding its policy on mobile termination tariffs. This notification was published in response to a proposal issued by the major mobile network operators in the Netherlands. These operators took the initiative to propose a phased reduction in interconnection tariffs for traffic terminating on their mobile networks. The reduction is spread over a three-year period, and introduces the concept of a flat rate interconnection tariff. With the flat rate tariff, there would therefore be no distinction in set-up and conveyance tariffs and in peak and off-peak tariffs for calls to mobile numbers. In its notification, OPTA accepted this proposal and

commented that such a commitment is in the interest of users and promotes sustainable competition in the market.

5.2 Mobile Interconnection Rates in new EU Member States

The following chart has been extracted from the Fourth Report on Monitoring of EU Candidate Countries – Telecommunications Services Sector. The chart below shows the per-minute interconnection charges for call termination on mobile networks based on a three- minute call at peak time. The average charge in EU member countries (taken from the EU ninth Implementation Report) is included in the form of a blue line.



6 Commentary on Mobile Termination Rates

Malta Mobile Interconnection Rates:

	Price (€ cent per minute)	
	Average	**Comparison with EU average**
Mobile Termination Rate		
EU Average (SMP operator)	15.93	N/a
Vodafone Malta Ltd.	15.80	- 1%
Go Mobile	19.55	+23% *
Malta – Weighted average[5]	17.50	+10%

Note: Rate of exchange of € 2.30 to the LM:

Note *: The difference of 23% arises when comparing Go Mobile's Mobile Termination Rate (MTR) to the EU Significant Market Power (SMP) operators' average MTR. Such a difference decreases to 5.2% when one compares Go Mobile's MTR to the corresponding average interconnection rate offered by EU non-SMP operators.

- Go Mobile's approved MTR is not as yet cost oriented since this operator was only designated as a DMP in August 2003. Go Mobile will be publishing its RIO and cost oriented tariffs by the end of the third quarter of 2004, for implementation by 1 October 2004.

- Vodafone Malta Ltd (VML) currently offer a Mobile Termination Rate of 6.85c (€c15.80) which is based on the MCA's Decision published in May 2003. Vodafone will be submitting its revised RIO by the end of the second quarter 2004 for implementation on 1 October 2004.

[5] Based on Market shares.

7 Strategy for Mobile Interconnection

7.1 Short-term Strategy

The "Weighted Average Cost of Capital" (WACC) for Vodafone Malta Ltd has been approved at 18.3% (pre-tax nominal), which was the highest rate out of a number of ranges. A reduction in the WACC may reduce interconnection rates depending on the extent of the adjustment. In this respect, a review will be carried to the WACC each year in order to have this reflective of current business environment and risk exposure. The WACC for Go Mobile will be determined as part of the RIO review later on this year.

Benchmarking:

Approaches to the use of benchmarks to set interconnection rates are described in further detail in chapter 8 of this document.

7.2 Long-term Strategy

7.2.1 Formulation of a glide path for interconnection charges

A glide path is one method of achieving a competitive level of interconnection charges over a number of years.

This topic is covered in greater detail in Appendix 1.

7.2.2 Implementation of Best-Practice Mobile Termination Rates (MTRs)

Currently, the Principles of Implementation and Best Practice (PIBS) adopted by the Independent Regulators Group (IRG) relating to remedies available for cost-based MTRs are limited to general benchmarking. IRG will review the benchmark annually with the intention to agree on a timeframe for achieving a competitive level of charges in IRG member states as soon as possible.

Further information relating to this topic is provided in Section 8.2 and Appendix 4.

7.2.3 Transition to Current Cost Accounting

Mobile Network Operators would need to restate their top-down model to MEA (Modern Equivalent Assets) by revaluing their assets, applying economic depreciation, and restating OPEX to efficient MEA levels.

This topic is covered in greater detail in Appendix 2 of this document.

7.2.4 Transition to LRIC (Long Run Incremental Costing)

Should interconnection rates consistently remain above EU average, then a transition to LRIC (Long Run Incremental Costing) may be considered

8 Developments within the EU

8.1 Recommendation on Interconnection Pricing

In January 1998, the European Commission published Recommendation 98/195/EC on Interconnection in a liberalised telecommunications market (part 1 – Interconnection Pricing). The objective of this Recommendation was to provide guidance to National Regulatory Authorities (NRAs) regarding best current price call termination interconnection services in the European Community.

This Recommendation stated that 'until interconnection charges based on forward-looking long-run average incremental costs (FL-LRIC) are put in place, it is appropriate to publish international comparisons of interconnection charges as a means of assisting National Regulatory Authorities in ensuring the implementation of cost-oriented interconnection rates to the networks of notified operators'.

The 'best current practice' interconnection charges were intended to provide guidance to the NRAs until appropriate cost accounting information to justify interconnection charges is made available by operators designated as having significant market power, as is required under Article 7 of the Interconnection Directive 97/33/EC.

A review was periodically held to update the best current practice interconnection charges, with Recommendation 98/511/EC being published in July 1998 and Recommendation 2000/263/EC being published in March 2000.

In February 2002, the Commission published Recommendation 2002/175/EC which stated that 'the sixth and seventh Commission reports on the implementation of the telecommunications regulatory package note the progressive reduction of interconnection charges in the EU to the levels published by the Commission's best practice recommendations, and the increasing availability of cost accounting systems for operators with obligations to interconnect.

In view of the above reductions in interconnection charges within EU member states, the Commission recommended that with effect from January 1, 2002 it was considered no longer necessary to refer to the 'best current practice' approach and update of price recommendation as originally included in Recommendation 98/195/EC.

This trend toward a continuous and gradual reduction in interconnection rates should be followed by operators of telecommunications services in Malta with a view to reducing the scope for regulatory intervention in this field.

8.2 PIBS on Mobile Termination Rates

In March 2002 the European Union adopted new Directives for the telecommunications sector. These directives set out a new framework for the regulation of electronic communication networks and services and amongst others request National Regulatory Authorities (NRAs) to investigate competition on relevant national markets and if necessary impose regulatory obligations on undertakings that have an SMP (Significant Market Power) in those markets.

The Independent Regulator Group (IRG) supports the process of harmonising the implementation of the new framework and adopts Principles of Implementation and Best Practice (PIBs) that support this process. The PIBs on the application of remedies in the mobile wholesale voice call termination (MT) market provide guidance to NRAs for a common approach towards the use of remedies in dealing with competition problems in this market.

Appendix 4 includes a snapshot of mobile termination rates published by the IRG in March 2004 as part of the monitoring process.

9 Consultation framework

The MCA would like to invite comments from interested parties in relation to the various issues raised in this document. The consultation period will run until 12.00pm on Friday 20 August 2004. Comments should be sent to:

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Written representations will be made publicly available at the MCA on request, unless these are of a confidential nature. Respondents are therefore asked to separate out any confidential material into a clearly marked annex. Respondents are also kindly requested to refer their comments to the specific sections of this document.

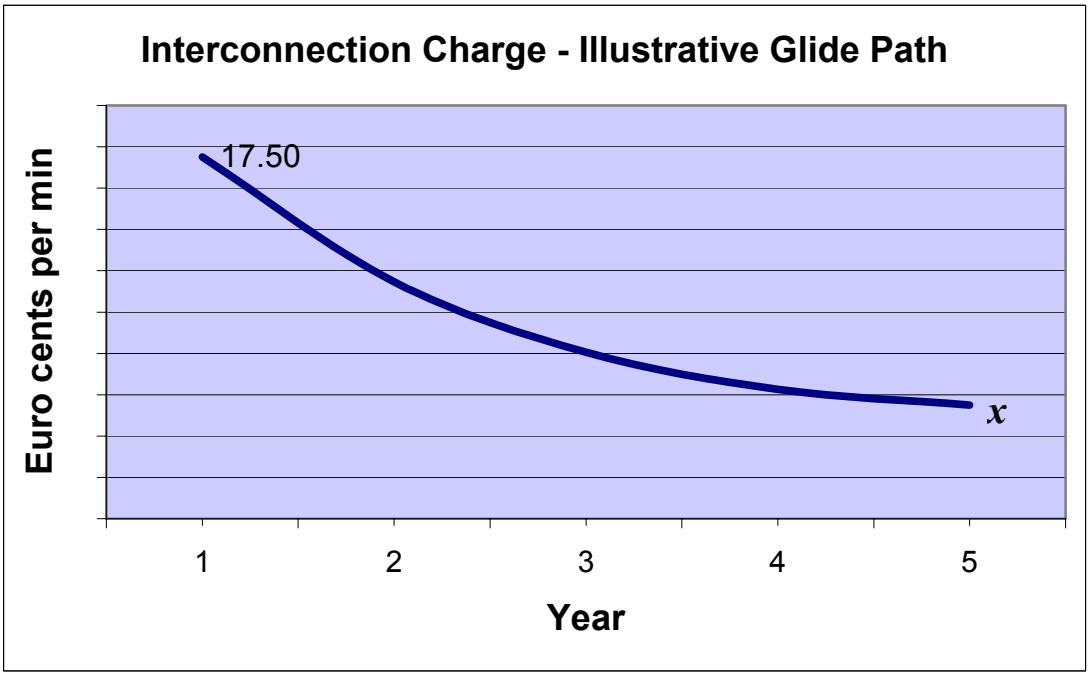
Appendix 1

Formulation of a glide path for interconnection charges.

A glide path is one method of achieving a competitive level of interconnection charges over a number of years. Such an approach can be summarised as follows:

- The time period (e.g. between three and five years);
- The definition of the starting rates for the glide path;
- The target interconnection rate at the end of the glide path period;
- The basis for calculating such a target rate (e.g. the fifth lowest average termination rate from operators in EU member states),
- The maximum ceiling for the yearly reduction in the interconnection charges (e.g. 20% per year over five years).

Such an initiative would ensure a gradual transition from the current levels of interconnection rates.



Appendix 2

Transition to Current Cost Accounting.

The main drawback of FAC Historic Cost Accounting systems is that the true current value of a company's assets may bear little relationship to their historic purchase price (cost) due to technological changes and general inflation over time. The cost of fixed assets, as reflected in annual depreciation charges and the required rate of return on capital, is usually a significant percentage of the total costs of a telecommunications network. This means that Operator A paying an interconnect charge to Operator B might be paying for the historic purchase costs of Operator B rather than the true current costs of the service.

Where equipment prices are falling, which is the typical scenario in the telecommunications network industry (e.g. switching and transmission equipment), this would raise interconnection costs relative to the costs of installing new equipment, thereby placing Operator A at a disadvantage or distorting its invest versus interconnect decision.

For this reason FAC (Current Cost) is often the preferred costing methodology. The process of shifting from an HCA to a CCA usually involves:

- **Revaluation of Assets**: it is necessary to make detailed estimates of the current value of all fixed assets on a replacement cost or modern equivalent asset (MEA) basis annually. The difficulty with this task is directly related to the age and complexity of the network. The older and more complex the network is, the harder the task. Generally the newer the network the better and more up to date are the records of that equipment;

- **Depreciation Adjustments**: existing asset lives are applied to the current cost asset values. The accounting entries that are generated are adjustments in depreciation (supplementary depreciation and backlog depreciation) as well as any holding gains and losses generated by asset price changes that occur during the accounting period.

The fixed and mobile network operators would therefore need to restate their top-down model to MEA (Modern Equivalent Assets) by revaluing their assets, applying economic depreciation, restating OPEX to efficient MEA levels.

Appendix 3

The use of Bottom-up Cost Modelling by the MCA.

Bottom-up (BU) cost modelling involves the development of engineering-economic models, which are used to calculate the costs of particular network elements and services. This approach requires estimates to be made of the costs of efficient, forward-looking technology and efficient operating costs. Bottom-up models are more likely to reveal the scope for efficiency improvements and estimations of the costs of rebuilding the incumbent's network using optimal technology.

In order to develop a solid cost model, it is useful to have in place a Current Cost Accounting (CCA) system. Facts have shown that when CCA was used to calculate interconnection service costs, a 30% to 40% immediate reduction in prices was achieved when compared to Historical Cost Accounting (HCA) pricing.

This methodology can be approached on either a 'scorched earth' or a 'scorched node' basis. The scorched earth basis assumes that optimally sized switches would be employed at locations optimal to the overall transmission design, as if the network was being designed on a greenfield site.

The scorched node basis assumes that optimal technologies would be employed to perform equivalent functions at existing nodes, and that optimal transmission technologies would be used to connect up these nodes.

The building of a bottom up cost model on a scorched node basis by the MCA should contribute towards the further reduction of interconnection rates since there would be scorched-node optimisation.

Appendix 4

IRG Snapshot of Mobile termination rates (MTR)

Country	Average MTR per country (as at 31 Jan 2004) €/min		
	Peak	Off-peak	Total
Norway	0,0893	0,0893	0,0893
Cyprus	0,0928	0,0928	0,0928
Lithuania	0,1381	0,0705	0,1043
Czech Rep	0,1106	0,1106	0,1106
Ireland	0,1333	0,0999	0,1166
Sweden	0,1231	0,1060	0,1174
Iceland	0,1240	0,1149	0,1194
Denmark	0,1581	0,0810	0,1195
UK	0,1736	0,0678	0,1207
Slovak Rep	0,1282	0,1083	0,1236
Poland	0,1560	0,0955	0,1258
Latvia	0,1278	0,1278	0,1278
Austria	0,1282	0,1282	0,1282
Finland	0,1290	0,1290	0,1290
Spain	0,1667	0,0906	0,1342
Hungary	0,1626	0,0906	0,1381
Luxembourg	0,1500	0,1300	0,1400
Belgium	0,1637	0,1146	0,1413
Germany	0,1505	0,1505	0,1505
France	0,1603	0,1334	0,1535
Slovenia	0,2100	0,1000	0,1550
Italy	0,1756	0,1374	0,1572
Netherlands	0,1622	0,1622	0,1622
Malta	0,1762	0,1762	0,1762
Greece	0,1800	0,1800	0,1800
Estonia	0,1857	0,1857	0,1857
Portugal	0,2364	0,1748	0,2207
Switzerland	0,2221	0,2221	0,2221

The assumptions included in the benchmark are the following:

1) The benchmark includes fixed-to-mobile termination charges.

2) In order to obtain a homogenous comparison a 3-minute average call duration has been used; set-up charges were accounted for by the standard formula.

3) Traffic data (voice calls and number of minutes) and peak/off peak ratio is missing for some countries. For those countries that did not communicate a peak/off peak ratio, a value of 1 (50/50) for this ratio has been taken. For peak, off-peak and weekend traffic, the assumption has been 50%-25%-25%.

4) Average MT Tariffs per country have been obtained by adding each operator's average MT tariff multiplied by its market share, measured in terms of subscribers (bearing in mind that 'subscribers' may be defined differently).

5) The MT charges are those applicable on the 31 January 2004.

(Source: IRG)