Principles of Implementation and Best practice

on the application of remedies in

the mobile voice call termination market

as decided upon by the Independent Regulators Group

on

1 April 2004

National Regulatory Authorities (NRAs) implement the regulatory framework laid down in EU and national law. These principles of implementation and best practice (PIBs) have been devised by IRG to assist in the process of harmonizing the implementation of remedies in IRG member states. The NRAs are committed to implement these principles wherever possible.

General introduction

On 11 February 2002 the European Union adopted new guidelines for the telecommunications sector. These guidelines 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 obligation on undertakings that dominate those markets. Member States of the European Union have to implement this new regulatory framework into their national legislation.

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

Principles of Implementation and Best Practices with regard to remedies on competition problems in market for (voice) call termination on an individual mobile network

IRG has adopted the following principles with regard to application of remedies on competition problems in the wholesale market for call termination on an individual mobile network:

1. The objectives of competition on retail markets and the interests of consumers are promoted if obligations that regulate MT charges aim to minimize the adverse effects of the possible lack of competition on the relevant wholesale market for mobile call termination.
2. IRG believes that obligations imposed on MNOs should be proportionate and can range from price transparency through to charge controls and non-discrimination (supported by accounting separation) in order to set cost-oriented charges and to help prevent a MNO from discriminating against other operators.
3. IRG finds that non-discrimination and transparency obligations at the wholesale level can have effect on MT charges, but by themselves are unlikely to be sufficient to achieve the intended aim of the regulation, i.e. MT charges at a competitive level.
4. IRG believes that charge control that in the long term sets MT charges at a competitive level is proportionate and justified because this obligation can effectively prevent the adverse effects of possible lack of competition on the wholesale call termination market.
5. In order to determine the competitive level of MT charges, a range of costing methods could be used, including the Long Run Incremental Cost (LRIC) method[1].
6. IRG recognizes that an immediate implementation of charge control that sets charges at the competitive level could cause disproportionate problems for mobile operators. In such cases NRAs may apply a price cap system or a glide path to achieve a competitive level over a reasonable period of years. In order to support development toward MT charges at a competitive level, and to assist NRAs in deciding on MT charges, IRG will publish a benchmark on MT charges. 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.
7. IRG recognizes that national or market specific circumstances can justify different remedies in order to achieve a competitive level.

[1] Calculated using either a bottom-up or top-down principle (ideally both).

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Considerations

Regarding the application of remedies in the wholesale mobile voice call termination market the Independent Regulators Group (IRG) has considered the following:

a) IRG welcomes the European Parliament and Council guidelines of February 2002 forming a new regulatory framework for the telecommunication market and believes that this new framework will stimulate the development of competition on the relevant markets;
b) IRG welcomes the recommendation on relevant product and service markets of the European Commission (hereafter: EC Recommendation on relevant markets)[2] which gives guidance for defining the relevant wholesale market for mobile call termination;
c) IRG is committed to contribute to a successful implementation of the new Regulatory Framework, working together with the Commission and all other interested parties;
d) IRG agrees with the European Commission's recommendation that the market for voice call termination at the wholesale level on individual mobile networks is the relevant market for ex-ante regulation under the new regulatory framework, but recognizes that an NRA has to assess this market definition for its own national market.
e) IRG believes that the wholesale market for call termination on an individual mobile network is not likely to be effectively competitive and that the distortion of competition on this wholesale market can have adverse effects, but recognizes that an NRA has to establish whether there is effective competition in its own national market.
f) Regulatory actions taken in one national market might have consequences on competition on other national markets. Diffuse regulation throughout Europe could have distorting effects on competition.
g) Although IRG recognizes that there may be structural differences between national markets which justify a differentiated regime of obligations, IRG wants to prevent distorting effects on competition by harmonizing the approach that NRAs in the different member states of the European Union will have on the application of remedies in the mobile call termination market.
h) IRG believes this is best achieved by formulating Principles of Implementation and Best Practice (hereafter: PIBs).
i) IRG considers these PIBs the result of a first effort and intends to continue the co-operation between NRAs on this subject
j) IRG intends to continue developing and reviewing these PIBs on remedies in the MT market in the future.

[2] 'Recommendation on the relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European parliament and of the Council on a common regulatory framework for electronic communication networks and services' of 11 February 2003, C(2003)497

1. Regulatory framework of PIBs

This chapter contains a short explanation of the new regulatory framework (EU Guidelines, Directives and the Recommendation of the European Commission) and the articles and obligation(s) relevant for the application of remedies to the mobile termination market by NRAs.

The new regulatory framework for electronic communications networks and services comprises five Directives:

Directive of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services[3], hereinafter the Framework Directive

Directive of the European Parliament and of the Council on the authorisation of electronic communications networks and services[4], hereinafter the Authorisation Directive

Directive of the European Parliament and of the Council on access to, and interconnection of, electronic communications networks and associated facilities[5], hereinafter the Access Directive

Directive of the European Parliament and of the Council on universal service and users' rights relating to electronic communications networks and services[6], hereinafter the Universal service Directive

Directive of the European Parliament and of the Council concerning the processing of personal data and the protection of privacy in the electronic communications sector[7]

Article 15(1) of the Framework Directive requires that the European Commission identifies, in accordance with Annex I of that Directive, those product and service markets within the electronic communications sector, the characteristics of which may be such as to justify the imposition of regulatory obligations set out in the specific directives.

On the 11 February 2003,the Commission adopted the Recommendation on the relevant product and service markets[8] within the electronic communications sector susceptible to *ex ante* regulation in accordance with the framework Directive.

The market review process consists of two parts starting with market definition and identification, followed by market analysis. In the event that an operator is desinated as having significant market power (SMP), i.e. corrective action must follow.

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[3] OJ L 108, 24.4.2002, p.33.
[4] OJ L 108, 24.4.2002, p.21.
[5] OJ L 108, 24.4.2002, p.7.
[6] OJ L 108, 24.4.2002, p.51.
[7] OJ L 201, 31.7.2000, P.37.
[8] Recommendation on the relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European parliament and of the Council on a common regulatory framework for electronic communication networks and services' of 11 February 2003, C(2003)497.

Article 8 of the Access Directive states that where an operator is designated as having SMP on a specific market as a result of a market analysis carried out in accordance with Article 16 the Framework Directive, NRAs shall impose the obligations as set out in article 9 to 13 of this Directive as appropriate.

These obligations are:

1) The obligation of transparency;
2) The obligation of non-discrimination;
3) The obligation of accounting separation;
4) Obligations of access to, and use of, specific network facilities;
5) Price control, including cost orientation, and cost accounting obligations.

It should also be noted that in exceptional circumstances, Article 8(3) of the Access Directive allows NRA to impose obligations other than those listed above, subject to the Commission's authorisation.

It is only where NRAs find that there is the absence of effective competition on that market that they impose remedies.[9] Even then there needs to be careful consideration of which remedy should be applied as NRAs have a suite of regulatory tools at their disposal, as set out in Directive 2002/19/EC and Directive 2002/22/EC. When imposing a specific obligation on an undertaking with significant market power, the NRA needs to demonstrate the obligation in question is based on the nature of the problem identified, proportionate and justified in the light of the NRA's objectives as set out in the Framework Directive.

These objectives require NRAs to:

– promote competition in the provision of electronic communications networks, electronic communications services and associated facilities and services;

– contribute to the development of the internal market;

– promote the interests of the citizens of the European Union.

The Framework Directive also requires NRAs to seek to agree between themselves the types of instruments and remedies best suited to address particular types of situations in the marketplace. In particular, as noted in the Guidelines on market analysis, in order to establish that a proposed remedy is compatible with the principle of proportionality, the action to be taken must pursue a legitimate aim and the means employed to achieve the aim must be both necessary and the least burdensome, i.e. it must be the minimum necessary to achieve the aim.

The underlying Principles of Implementation and Best Practices (PIBS) have been devised by IRG to assist in the process of harmonizing the implementation of remedies in the MT market in IRG Member States. The NRAs are committed to implement these principles wherever possible.

[9] Absence of effective competition is defined in the Guidelines as absence of undertakings with SMP on that relevant market.

2. Scope of PIBs

2.1 Introduction

The PIBS on remedies on the MT market formulate the common position of IRG towards the application of remedies on identified competition problems in the MT market. This chapter outlines the regulatory scope of these PIBs.

2.2 The process of market review and remedies

As described in chapter 1, NRAs have to investigate competition on relevant national markets and if necessary impose regulatory obligations on undertakings that dominate those markets in order to achieve the goals and objectives of the new EU framework. This regulatory task requires NRAs to conduct a market review prior to the imposition of obligations. The process of market review and remedies can be divided into the following stages:

(1) Defining relevant markets;
(2) Evaluating whether competition is effective and whether one or more operators are designated as having significant market power in the relevant market, and;
(3) Imposing, maintaining, amending or withdrawing specific regulatory obligations on undertakings designated as having SMP.

The PIBs on remedies in the MT market focus on the third stage. In these PIBs IRG formulates a common approach to the application of remedies on competition problems on the wholesale (or upstream) market for terminating calls on mobile networks. As the outcome of the first two stages will depend on the actual market review by NRAs of the national relevant markets and dominant position of Mobile Network Operators (hereinafter: MNOs) on that market, assumptions have been made regarding the outcome of the market review of the NRAs that establishes the relevant market and the (possible) dominant position of MNOs. In doing so a starting position that frames the scope of these PIBs on remedies in the MT market could be created. These assumptions are described in section 2.3 and 2.4.

2.3 Stage 1: Defining the relevant market

The PIBS on remedies for the MT market assume that the relevant market for terminating calls to mobile is defined as:

"the market for voice call termination on an individual mobile network"

This definition has been assumed because the wholesale market for voice call termination on individual mobile networks has been designated by the European Commission as a relevant market susceptible for *ex ante* regulation in its Recommendation on relevant markets of 12 February 2003[10,11].

[10] See Annex of 'Recommendation on the relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European parliament and of the Council on a common regulatory framework for electronic communication networks and services' of 11 February 2003, C(2003)497, market definition number 16.

Moreover the definition based on single termination markets for each mobile network has been recommended by IRG in the process leading to the new European framework. Regarding the market definition on mobile call termination, IRG commented in its input on the EC's working document on relevant product and service markets that:

"*On the basis of the arguments developed above, there is – at least currently - clear support for the approach that there are single termination markets for each mobile network and that there is no significant disciplining effect on an increase in mobile termination rates because of i) a lack of supply-side substitutability and ii) only rather limited evidence that demand-side substitutability would take place. Overall, most of the SMP-WGs members acknowledge that the mobile call termination markets in each of their Member States present strikingly similar characteristics. While it is important to keep in mind that the conclusions offered in this paper are strictly dependent on the current circumstances as well as competitive conditions in each Member State, it is envisaged that such characteristics and competitive conditions are overall analogous in these Member States.*" [12]

Thirdly this definition has been the conclusive outcome of market reviews that already have been undertaken by competition or regulatory authorities in the European Union[13].

2.4 Stage 2: Establishing Significant Market Power

Given the market definition that a MNO is the only supplier of the relevant service on the MT market and holds 100% of the relevant market, the PIBS on remedies for the MT market assume that each MNO has significant market power on the relevant market. Furthermore it assumes that there are no sufficient incentives that contain the MNO's dominant position on the market and forces them to

[11] With regard to this definition the European Commission remarked in its explanatory memorandum to the Recommendation on relevant market, page 34, that: *'The conclusion at the current time (under a calling party pays system) is that call termination on individual networks is the appropriate relevant market. However, such a definition would be undermined by (i) technical possibilities to terminate via other networks (this would broaden the market definition to call termination on all networks) (ii) evidence that users employ alternative means to circumvent high termination charges or (iii) evidence that users subscribe to networks on the basis of what it costs to be called (the last two would imply a linked market definition, comprising access, call origination and termination).*

[12] See ANNEX 1 of IRG consultation Input Document on a Draft Recommendation on Relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with directive 2002/21 EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services, 19th November 2002. Please note that RegTP and Ficora did not support the single network termination market definition in IRGs input to the European Commission.

[13] See e.g. for the UK Oftel, review on charge control on calls to mobiles, 26 September 2001, confirmed by the Competition Commission, 22 January 2003, again confirmed by OFTEL, review of the wholesale call termination market, EU market review 15 May 2003; for the Netherlands report by the Dutch Competition Authority NMa of 1 August 2002; EC decision on Telia/Sonera, case number: comp/m.2803/telia/sonera, 10 July 2002.

lower their MT charges to a competitive level[14]. Some of the market reviews that already have been made by NRAs and competition authorities throughout Europe seem to confirm this assumption[15].

Furthermore, as described in section 1, SMP remedies are imposed on market parties if they have a dominant position in the relevant market. Therefore it's only logical for the PIBs on remedies in the MT market to assume that a MNO is dominant in terminating calls to its own mobile network.

2.5 Stage 3: the process of applying remedies

The third stage of the process is imposing remedies on the MNO with SMP on the MT market. This stage can be broken down into the following steps:

(1) Identifying possible competition problems on the relevant market;
(2) Identifying and evaluating proportionate and justified remedies;
(3) Defining the forms of the proportionate and justified remedy;

In the case of applying cost accounting and price control as a remedy another layer can be distinguished:

(4) Deciding on the starting points of the applicable form of cost accounting and price control.

2.6 Scope of PIBs

As stated at the beginning of this section, the scope of these PIBs is to formulate the common position of IRG on the application of remedies on competition problems in the MT market. However it is important to remark that this common position has been adopted under the limitation that the relevant market and the dominant position of the MNO have been established as described in paragraph 2.3 and 2.4. IRG explicitly states that NRAs have to investigate whether for their national market the assumed market definition and dominant position are correct or that country specific issues influence these definitions. Therefore the market analysis done by an NRA will first have to confirm these assumptions before it can apply the underlying PIBs[16].

Furthermore the scope of these PIBs is limited to the common position of IRG on the first three steps in the process of applying remedies. A common position on the fourth step, i.e. the starting points of

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[14] With regard to this definition the European Commission remarked in its explanatory memorandum to the Recommendation on relevant market, page 34, that: '*A market definition for call termination on each mobile network would imply that currently each mobile network operator is a single supplier on each market. However, whether every operator then has market power still depends on whether there is any countervailing buyer power, which would render any non-transitory price increase un-profitable. The situation will have to be closely followed and will be part of the review in June 2004*.'
[15] Vide footnote 13.
[16] Article 7 of the Framework Directive, OJ L 108, 24.4.2002, contains a notification procedure that an NRA has to use if the analysis of its national markets would deliver a different market definition than those that are given in the EC Recommendation of 12 February 2003 or make a decision on designating a market party as having SMP.

the applicable form of price control / cost accounting, which is relevant in this framework if these obligations are an appropriate remedy, will be formulated in separate PIBs[17].

[17] In 2000 IRG formulated PIBs on LRIC. In 2003 IRG has consulted on these PIBS. The PIBS on Accounting Separation are currently under review together with the Commission's Recommendation on cost accounting (of 1998).

3. Stage 3: Applying remedies on competition problems in the wholesale market for voice call termination on an individual mobile network

3.1 Introduction

This chapter describes the common position of IRG on the application of remedies, following the steps as described in paragraph 2.5.

3.2 Step 1: Identifying competition problems on the MT market

As set out in Section 2, and consistent with the European Commission in its Recommendation on relevant markets of 12 February 2003 the relevant market is the market for wholesale voice call termination on individual mobile networks and this PIB assumes that MNOs have a monopoly, and hence SMP, on terminating calls on their own networks. Unless there are any compensating factors, this is likely to result in excessive charges for termination of calls to mobile networks both on a wholesale level (for Fixed and Mobile operators) and at the retail level. The causes of lack of competition will be explained briefly in the following sections.

3.2.1 Monopoly position on call termination

On the defined relevant MT wholesale market, the monopoly position of a MNO on terminating calls is a consequence of the control that it has over the access to end-users that are connected to its network. Callers require their network to connect (or terminate) their calls on other networks so that they are able to call each other. Thus, every operator that wants to deliver a call to a mobile end-user on a specific mobile network has to use the services of the MNO of that specific network. At present there are no adequate economic or technically supply or demand side substitutes to mobile termination, nor is it likely that viable alternatives for mobile call termination will be introduced in the market in the foreseeable future.

A lack of competitive incentives for MNOs to reduce termination charges also arises due to the calling party pays principle. Under the “calling party pays” (‘CPP’) arrangement, adopted in most European countries, the calling party (and not the called party) pays the total price of a retail call. This means that the voice call termination charge is included in the originating network provider’s (either fixed or mobile) cost base and is reflected in the retail price it sets for calls originating on its network. CPP thus leads to a disconnect between the person paying for the calls, (i.e. the calling party), and the person who makes the choice of the terminating network and who thereby can influence the level of the termination charge (i.e. the called party)[18].

In the mobile retail market the overall effect of the dominant position of a MNO on call termination is that, while MNOs have an incentive to keep the price of those services required and paid for by their own subscribers at a level to attract and retain customers, they have less incentive to do so for calls originating on any network other than their own. This is because these other network operators cannot

[18] Vide OFTEL, Review of the mobile wholesale voice call termination markets, EU market review 15 may 2003

take their business elsewhere if they are not satisfied. They have no alternative to terminating the calls on the network to which the called party subscribes.

In the wholesale market, the effect of the CPP arrangement is similar. For off-net mobile-to-mobile calls (i.e. from one MNO's network to another), MNOs pay each other for the termination of calls. Again, there is little incentive to keep termination charges low, not least since cutting them would in effect give the MNO's competitors an advantage in the retail market by reducing their costs. Hence, CPP means that an MNO is likely to be able to raise voice call termination charges above the competitive level without suffering sufficient adverse effects, like losing end-users, etc. to make the rise unprofitable.

In those countries were the market review has been performed, the monopoly position is not undermined by consumer behaviour. For example, research by the UK Competition Commission (CC) in 2002 found that mobile users attached low priority to the prices or calling them, people had low awareness of which mobile network they were calling, had low level of preparedness to adopt strategies that would save calling parties high charges (e.g. call back) and had a fairly low level of knowledge of actual prices. The CC concluded that "there is insufficient knowledge and concern among callers to mobile phones to induce them to change their behaviour to such a degree as to put pressure on call termination charges and force these down to competitive levels"[19].

3.3 Adverse effects of competition problem

3.3.1 MT charges above competitive level

IRG[20] considers that the monopoly on call termination on their own network in combination with the CPP arrangement provides the MNOs with the freedom and the incentives to set their voice call termination charges above the competitive level, i.e. the price level that would be set if the MT market was effectively competitive. Charges that are significantly above the competitive level cause an inefficient distribution of goods and capital and as they don't lead to maximizing social welfare, in the end they are not in the interests of end-users.

Taking into account that promoting effective competition and the interests of the citizens of the European Union are objectives of the new regulatory framework[21], it is IRG's view that MT charges that are significantly above the competitive level are not in accordance with the objectives of the regulatory framework and therefore are too high from a regulatory point of view[22].

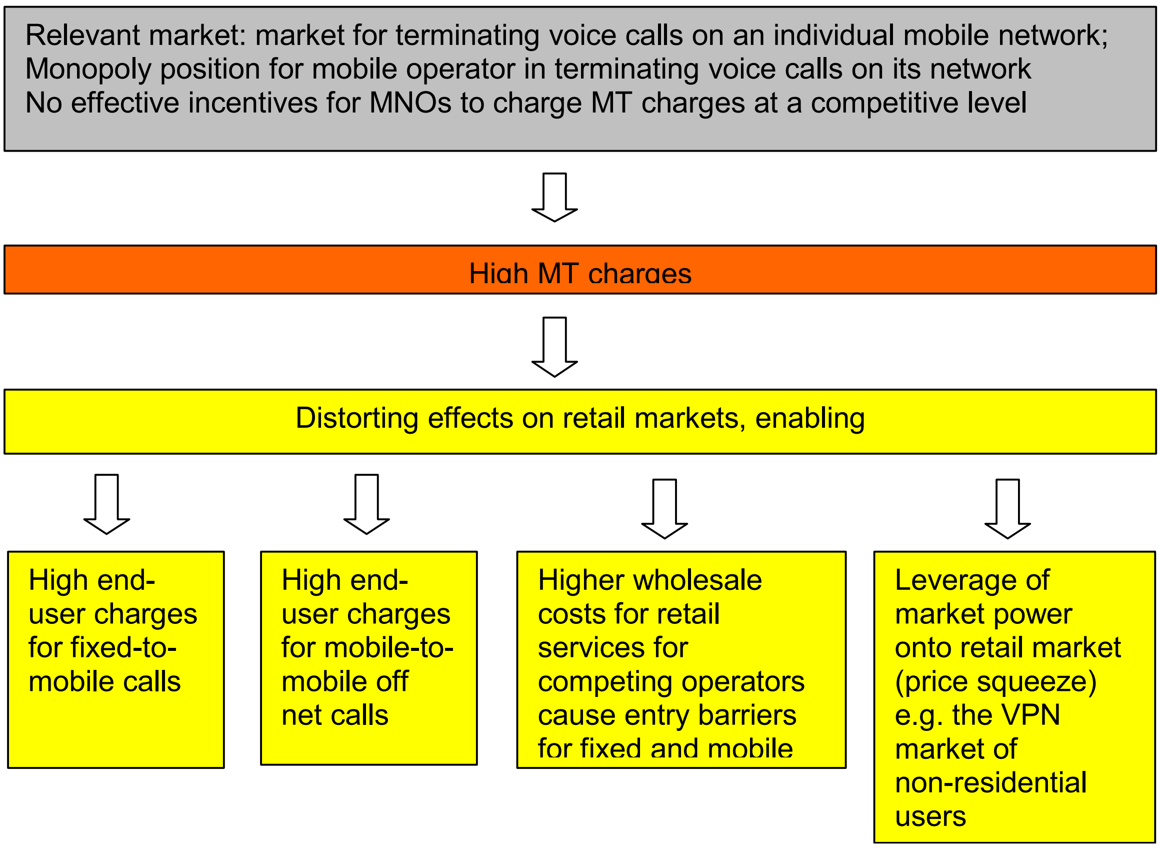
3.3.2 Adverse effects on retail markets

Analysis carried out within IRG and by individual NRAs showed that the high level of MT charges – which is a direct consequence of the competition problem on the wholesale MT market itself – can

[19] Vide Vodafone, O2, Orange and T-Mobile Reports on references under Section 13 of the Telecommunications Act 1984 on the charges made by Vodafone, O2, Orange and T-Mobile for terminating calls from fixed and mobile networks, Competition Commission, London, December 2002.
[20] Vide footnote 12 regarding the position of RegTP and Ficora
[21] Vide article 8 Framework Directive
[22] In some countries NRAs have already found evidence or strong indications that MT charges are significantly above the cost based level, that could be expected in the case of an effectively competitive MT market. Vide e.g. OFTEL, Review of mobile wholesale voice call termination markets EU Market Review, 15 May 2003, paragraph 4.17.

have adverse effects on retail markets. These effects mainly arise because the high MT charges cause the costs of services of competing operators to rise and enable the MNO to cross-subsidize mobile services to its own customers on the retail markets.

The following graphic gives a schematic overview of the adverse effects on retail markets that have been considered by IRG when formulating its common position on proportionate and justified remedies:



3.3.3 High MT charges enabling high retail prices

MT charges are part of the costs that an (originating) operator incurs when completing calls that terminate on another mobile network end-user and thus they feed through to their retail charges. Excessive termination charges for calls to mobile networks can therefore cause high end-user prices.

The effect of high MT charges on end-users is most noticeable in the retail prices for fixed-to-mobile calls. This is due to the fact that contrary to the position of MNOs, a fixed operator (because of regulation[23] of its prices) cannot compensate its high cost of terminating calls to mobiles with high revenue received for terminating calls to its own fixed network and therefore has little choice but to incorporate the full cost of terminating calls to mobiles into its retail prices.

High MT charges also lead to higher prices for off net mobile-to-mobile calls, because to some extent mobile operators include the high MT charges in their retail prices. This can be especially so if the cost of terminating calls to other mobile networks outweigh the revenue of terminating calls originating from that network. In theory, MT charges that MNOs charge each other could be able to be negotiated to an efficient level, but there is no evidence that this occurs in practice. The reasons for this may be that traffic patterns between two MNOs are not always in balance, market shares on the mobile market may not be equal, and MNOs want to prevent tromboning by fixed operators by charging a non-discriminatory MT charge.

3.3.4 High MT charges enabling leverage of market power in MT market into retail markets

If a market party operates both a mobile and a fixed telephony network, the competitive balance in the fixed retail market may be disturbed. High termination rates of its mobile arm, makes it possible for this market party to offer particularly low retail prices to its own fixed end-users for calls to its mobile network (ie by cross-subsidy). Other fixed operators have to pay higher termination charges and may therefore not be able to compete on the fixed retail market for this service (calls to the mobile network). This is to the competitive disadvantage of the other fixed operators. This is especially so when the calls to the mobile network of the operator is a significant share of the total volume of fixed-to-mobile calls. Where this leads to retail prices of fixed telephony that are below cost and this pricing policy has the purpose of enhancing a market position in the fixed market, this is a form of cross-subsidy which potentially is an abuse of a dominant position

The retail pricing structure of most MNOs contain retail prices for on-net calls which are often lower than the MT charges. This can create price squeeze problems for other operators that deliver calls to the end-user of that MNO.

A particular example where high MT charges and low on-net charges can cause competition distortion is the (sub) market for virtual private networks (VPN) for non residential customers. Both fixed and mobile operators offer large companies virtual private network services. These services comprise amongst other services calls between the different premises of the company and to employees with mobile phones. Fixed operators have to deliver these calls via the fixed-to-mobile route and thus have the high cost of services that is caused by the high MT charges. MNOs on the other hand deliver these calls to the mobiles as so called on-net traffic. Fixed operators can therefore be confronted with a price squeeze on the VPN market.

3.3.5 Distorting effects on level of wholesale costs

A direct consequence of high MT charges is that it raises the cost level of fixed and mobile operators. An operator that has to deliver a call to a mobile network will have a higher cost of delivering this service to its retail customer, but has to compete with the retail services of the MNO that does not have

[23] Only the prices of a fixed operator with SMP would be regulated. However, it is unlikely that non-SMP fixed operators would be able to raise prices as they have to compete with the SMP operator.

these high costs. Thus the effects on the retail prices, as described in the above paragraph in combination with the higher MT charges itself, can cause a margin or price squeeze for this competing operator.

IRG finds that fixed operators can be more affected by the high level of MT charges than mobile operators. This is due to the fact that in most countries almost all MNOs charge high MT charges. Consequently, in a bilateral relationship between two MNOs both have revenues and costs based on the same high MT charges, whilst in a bilateral relation between a fixed operator with an MNO, a fixed operator has its revenues based on lower (regulated) fixed termination rates and its cost of termination on the mobile network are based on the high MT charges. Consequently a fixed operator has large net out payments to an MNO. Due to the fact that in most countries the volume of fixed-to-mobile calls exceeds the volume of mobile-to-fixed calls this imbalance in outpayments is enhanced significantly.

The high cost of terminating calls to a mobile network can also influence the entry decision of new operators on the mobile market. A possible new entrant (e.g. service providers or mobile virtual network operators) may be deterred from entering the market because of the high level of wholesale costs of terminating calls. This will especially be so if traffic flows between an operator that has already entered the mobile market, and the possible new entrant are not balanced (see also section 3.3.3). In that case the new entrant will be confronted with a net cost of call termination[24] that cannot be recovered by charging higher prices for calls to mobile in a competitive retail market. This will mean that high MT charges might cause foreclosure of the mobile market.

3.3.6 Conclusion

There is a need for reasonable regulatory measures if the market review of a NRA assesses for its national market the above described competition problem of MT charges above the competitive level and/or one or more of its adverse effects on competition in the different relevant (sub)markets. In doing so, NRAs will promote the objectives of the new regulatory framework as laid down in article 8 of the Framework Directive, i.e. to promote competition in the telecommunication markets and to promote the interest of the citizens of the European Union.

3.4 Step 2: Identifying and evaluating proportionate and justified remedies.

3.4.1 Introduction

Under the New Regulatory Framework, the application of regulatory obligations should be consistent with the principles of competition law. Any regulatory measure that is imposed on an undertaking with SMP should be reasonable and aimed at promoting competition on the telecommunication market, at contributing to the development of the internal market and / or at promoting the interests of the citizens of the European Union[25]. The imposition of a specific obligation on an undertaking with SMP

[24] An operator that has interconnection incurs (external) costs if it has to deliver calls that originate on its own network and terminates on the other network. It also has revenues from terminating calls on its own network that originate on the other network. 'Net cost of call termination' is the (external) cost of call termination that exceeds the revenues of call terminating.

[25] Vide article 8 of Framework Directive

does not require an additional market analysis but a justification that the obligation in question is appropriate and proportionate in relation to the nature of the problem identified[26].

This means first of all that for a NRA to impose an obligation on a MNO having SMP on the MT market it is necessary to understand the nature of the competition problem in question and to consider the effect that the obligation can have on competition in the relevant market and in other (sub)markets of the telecommunication market. Moreover the proposed measure must pursue a legitimate aim and must be both necessary and the least burdensome, i.e. it must be the minimum necessary, to achieve that aim[27].

This chapter sets out IRG position on justified remedies on the MT market that are appropriate and proportionate.

3.4.2 Objectives of imposing obligations

An important characteristic of the competition problem on the MT market is that call termination is necessary for operators to terminate calls to the end-users on that network. Moreover the strong position of an MNO on the wholesale market for MT is not likely to change nor are there developments expected in the foreseeable future that could lead to stronger incentives for MNOs to charge competitive prices.[28]

Considering this market failure IRG recognizes that any obligation that is imposed by an NRA should aim at overcoming competition problems, i.e. addressing high MT charges and its consequent adverse effects on competition in retail markets. IRG considers that high MT charges are a competition problem as long as they are set above the charge level of an effectively competitive wholesale MT market. At such a level the cost of call termination are efficiently set and the level of MT charges can be considered the outcome of a sustainable competition process.

It's IRGs view that MT charges should be set at a competitive level, i.e. the charge level that would be set if the wholesale MT market would be effectively competitive. In an effectively competitive market, excessive margins are competed away and prices driven down to the efficient level of cost plus a sustainable margin.
Any regulation that is imposed on an MNO should ultimately contribute to achieving that goal. Stating this IRG also recognizes that implementation of regulation that sets charges at the competitive level immediately could cause disproportionate problems for mobile operators. In such cases a gradual decrease of charges over a reasonable period of years to the competitive level can be appropriate.

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[26] Vide considerance (15) of Access Directive: *'The imposition of a specific obligation on an undertaking with significant market power does not require an additional market analysis but a justification that the obligation in question is appropriate and proportionate in relation to the nature of the problem identified'*
[27] E.g. with regard to the obligation of price regulation article 13 Access Directive sets out that NRAs have to ensure that any price control mechanism promotes efficiency, sustainable competition and maximises consumer benefits (Par. 2). Furthermore NRAs shall take into account the investment made by the operator and allow him a reasonable rate of return on adequate capital employed, taking into account the risks involved. See Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services, 2002/C 165/03, considerance 118.
[28] Of course NRAs will have to assess the outcome of their measures for their own national market.

IRG considers this goal to be justified. MT charges at a competitive level will promote competition in the telecommunication markets, because they will lower the cost of calls to mobiles for other operators, thus making their services become more cost efficient and preventing any possible undesired leverage of market power to those markets. Consequently any price squeeze problem that might arise is at least partially addressed.
Furthermore MT charges at a competitive level will promote the interests of the citizens of the European Union, because lower cost mobile call termination will mean lower more efficient retail prices for calls to mobiles, principally for fixed-to-mobile calls. Further, lower termination charges will lead to higher demand and thus lead to greater economic efficiency.

IRG considers that addressing the described effects of the competition problem by targeting the MT charges itself and not every specific adverse effect in retail markets separately is in line with the principles of the new regulatory framework that intends to remedy competition problems at wholesale level as much as possible[29] and contribute to proportional regulation as it minimizes the regulatory burden.

It must be noted that significant differences in the level of MT charges between two countries that are based on inefficiencies can influence trade between two countries. An inefficient level of MT charges (of an MNO) in one country could lead to operators or citizens in other countries paying an inefficient charge and in doing so subsidize the MNO in the other country. Especially if traffic volumes are not balanced between countries, inefficient high MT charges in one country could cause a transnational cash flow that is not based on effective competition and may be to the detriment of competitors and consumers of other countries. Therefore IRG considers that an obligation that targets the inefficiency of high MT charges also can contribute to the development of the internal market.

1. The objectives of competition on retail markets and the interests of consumers are promoted if obligations that regulate MT charges aim to minimize the adverse effects of the possible lack of competition on the relevant wholesale market for mobile call termination.

3.4.3 Possible obligations

The Access Directive allows NRAs to impose a set of obligations on an operator with SMP in order to deal with an identified competition problem. The obligations set out in the Access Directive are, as described before:
- transparency (article 9);
- non-discrimination (article 10);
- accounting separation (article 11),
- obligations for access to and use of specific network facilities (article 12) and
- obligations regarding price regulation including cost accounting (article 13).

[29] The explanatory memorandum to the Recommendation on the relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European parliament and of the Council on a common regulatory framework for electronic communication networks and services' of 11 February 2003, C(2003)497, page 15. states: '..The identification of a retail market for the purposes of ex ante market analysis does not imply, where there is a finding of a lack of effective competition by a NRA, that regulatory remedies would be applied to a retail market. Regulatory controls on retail services can only be imposed where relevant wholesale or related measures would fail to achieve the objective of ensuring effective competition."

Obligations that require MNOs to provide access to and use of their network facilities on the MT market are necessary but alone insufficient to address the identified problem on the MT market i.e. high MT charges due to lack of competition. Therefore IRG considers this obligation as a necessary but not sufficient remedy to address the identified problem on the MT market. The next paragraphs contain IRG's common positions on the application of the remaining possible obligations. Stating this IRG is aware that national market reviews may find national or market specific circumstances that can justify different remedies in order to achieve a competitive level.

3.4.3.1 Transparency

Article 9 of the Access Directive allows NRAs to impose obligations of transparency. Transparency on the wholesale market can be implemented via obligations to publish charges and proposed changes to those charges in advance of them taking place. The requirement to publish charges and changes to those charges in advance has two main purposes:

(a) to assist transparency for the monitoring of potential anti-competitive behaviour and
(b) to give advanced warning of changes to charges to providers purchasing wholesale termination services.

Transparency can act as a constraint on anti-competitive behaviour, ie an SMP's knowledge that his prices are monitored by both the NRA and competitors should deter anti-competitive pricing which might otherwise emerge. Advance warning can for example be important to ensure that other providers have sufficient time to plan for such changes, as they may need to restructure their retail prices in response to charge changes at the wholesale level. This is particularly important in respect of this market as each of the operators has SMP in the relevant market and because purchasers of termination services have no choice but to pay the mobile voice call termination charge when terminating calls to each of the MNOs.

This obligation would ensure transparency for purchasers of wholesale termination services, and provide advance warning of changes in charges to providers who purchase wholesale termination services.

Regarding the competition problem in question, it is IRG's view that transparency obligations by themselves cannot sufficiently constrain the MNO's ability to set excessive charges for their voice call termination services. In theory transparency can stimulate the decreasing of termination charges because it reduces the ignorance of consumers. However practice in some countries shows that this is not the case[30]. There is also a limitation of what obligation can be imposed. The framework states that

[30] The available market reviews on consumer behaviour so far suggest that higher consumer awareness does not lead to sufficient incentives for an MNOs to charge competitive MT charges. To the extent that consumers become more aware of the high cost of calling fixed –to-mobile, they change to alternative ways to reach the mobile end-users such as (on-net) mobile-to-mobile calls. To the extent that mobile callers care about the costs of being called (e.g. group of family or friends that call each other frequently or a company that has many employees with mobile calls), alternative services as 'closed group users' or so called mobile virtual private networks are offered that make that MNOs also control the alternative services. Therefore even if consumer awareness leads to higher price elasticity on retail calls to mobile the MNO still benefits from high MT Charges as it will attract more calls to its network. Therefore transparency with the purpose of creating consumer awareness is not likely to have sufficient incentives for a MNO to create sufficient buyer power on the wholesale

obligations must be imposed on the wholesale level. Transparency on the wholesale market does not mean that there is also transparency for retail costumers. In order to create transparency for consumers, i.e. for them to know what it costs to call from fixed to a specific mobile network, the obligation of transparency should be imposed on, for example, a fixed network operator. If a MNO has SMP on the mobile termination market, it is not possible to impose obligations on this fixed network operator. Practice in some countries has shown that transparency on the wholesale market does not efficiently address transparency at the retail level. Moreover in most countries operators already have a good overview of the charge schemes of other operators, but still the level of MT charges is significant above the indicative competitive level.

Therefore IRG finds that, while transparency obligations maybe useful in combination with other obligations, transparency obligations alone are not sufficient to deal with high MT charges.[31]

3.4.3.2 Non-discrimination

Article 10 of the Access Directive allows NRAs to impose obligations of non-discrimination.

A non-discrimination obligation seeks to prevent a vertically integrated operator – as in practice all European MNOs are- acting in such a way as to have a material adverse effect on competition. In the absence of an obligation not to unduly discriminate MNOs may offer different terms to different purchasers of their voice call termination services that have anti-competitive effects.

It is possible for MNOs, and other operators for that matter, to discriminate traffic on the basis of the origin of traffic. Discrimination is possible between:

1. *Traffic originating on other networks*:
   Discrimination between traffic of different operators will influence traffic flow. If one operator has lower charges this might trigger it to become a transit operator for traffic that originates on other networks and terminates on the mobile network (tromboning). MNOs will try to prevent tromboning. The easiest way to do so is charging a single MT charge. However in some countries IRG has found that MNOs charge different MT charges based upon the originating network.
2. *Traffic of own fixed network and traffic of other operators*:
   Where an operator has both a fixed and a mobile network, discrimination between traffic originating on networks of other operators and traffic originating on its own fixed network could occur.
3. *Traffic of other operators and traffic of own mobile network (on-net calls).*
   Throughout Europe the differences in the level of on-net retail prices and the level of call termination prices of an MNO suggest this form of discrimination seems possible.

As most MNOs do not have separate accounting which makes clear what the level of cost of the MT component is, NRAs may not have sufficient information in order to establish whether discrimination exists or not.

MT market that can sufficiently compensate for the dominant position of an MNO. Vide e.g. The Review of mobile wholesale voice call termination markets, OFTEL EU market review, 15 May 2003, page 24

[31] Besides this, IRG is aware of the fact that transparency can also have a negative impact on competition. Too much transparency could lead to collusive or parallel behaviour of MNOs.

Can non discrimination prevent high MT charges and leverage of market power?
Non-discriminatory obligations, especially an obligation to treat traffic from other operators and own traffic equally, in combination with accounting separation could prevent price discrimination.

However IRG finds that non-discrimination by itself is unlikely to be sufficient to achieve the intended aim of the regulation, i.e. MT charges at a competitive level. Experiences of NRAs with non-discrimination so far show that such an obligation prevents a MNO from using its dominant position by raising its MT charges significantly towards an individual operator, but it does not necessarily lead to competitive MT charges[32].

IRG does believe that non-discrimination, even in combination with accounting separation, could prevent the strong incentives for cross-subsidy/leverage of market power from the MT market into the retail market. Although non discrimination, especially in combination with accounting separation, would make the costs of terminating on-net calls visible, a MNO can still have a pricing strategy that incorporates a retail price structure with low on-net charges that do not take into account the full costs of the service (and thus taking a possible in-company loss on terminating on-net calls for granted). MNOs could argue that competition within the retail market is such that the MNO is forced to have these low on-net retail prices.

There may arise practical and legal problems when imposing non-discriminatory obligations on MNOs, especially obligations that target equal treatment of on-net and off-net calls as the internal price of terminating an on-net call is difficult to calculate. The wholesale costs that a MNO designates to termination of an on-net call are likely to be based on profit maximisation decisions at the retail level and may differ from the standard regulatory method of determining MT charges[33].

A NRA may want to impose an obligation of accounting separation in order to support the obligation of non discrimination. However accounting separation may not be sufficient in determining the real internal costs of terminating on-net calls as this obligation may not prevent a MNO from shifting (common) costs between accounts arbitrarily.

A NRA may alternatively try to derive the internal costs of terminating an on-net call from the retail prices that a MNO handles (by means of a retail minus approach or a price squeeze test). These calculations may be difficult considering the complex wholesale and retail pricing structure of the services that MNOs have. Also this approach assumes that a strong competitive retail market where any excessive profit of MNOs from MT charges is competed away. If excessive MT profits are not competed away at the retail level, the excessive margins at the wholesale level may be reflected in retail prices and the retail minus approach may lead to an excessive transfer price compared to cost.

If MNOs are not designated as having SMP on the retail market, which is likely to be the case for many countries, it is unlikely that MNOs will have an obligation that retail charges must be cost

[32] Market survey by IRG so far shows no evidence or indications that an obligation, based solely on non discrimination has had a significant downward effect on MT charges in Europe.
[33] The cost of service of on-net call termination based on profit maximization decisions at the retail level may incorporate only marginal costs and may not take into account the common and joint costs that from a regulatory point of view may be part of the costs of service of terminating a call.

oriented. This means that MNOs can set on-net call charges lower than the internal transfer price and simply accept losses for their on-net service due to competition on the bundle of services that is offered on the retail market. By setting their internal transfer price to the same level as MT charges (which may not be set at the competitive level) MNOs can still fulfil their non-discrimination obligation.

Conclusion on obligation of non discrimination.
Non-discrimination might prevent a MNO from price discrimination of call termination on the basis of call origin. It is unlikely that non discrimination, even in combination with accounting separation, can remedy an existing high level of MT charges, because by itself does not oblige or stimulate a MNO to lower its MT charges. IRG therefore concludes that non-discrimination, by itself, is unlikely to be sufficient to achieve the intended aim of the Regulation, i.e. MT charges at a competitive level.

IRG recognizes that national or market specific circumstances can justify different remedies in order to achieve a competitive level.

3.4.3.3 Accounting separation

Article 11 of the Access Directive allows NRA to impose obligations of accounting separation.

An obligation to have separated accounting may be used to require an MNO to keep separate accounts for its wholesale network operation and its retail arm. As such this obligation makes transparent the costs that an MNO incurs when using the wholesale services of its own network. This can be used to verify that non-discrimination is maintained.

As already mentioned in the section on non-discrimination, this obligation can create transparency and in doing so support the effect of obligations that ensure non-discrimination. However, given the strong position of the MNO on call termination - especially the fact that its pricing policy on call termination is not like to be influenced by consumer behaviour in a significant way - this obligation, like transparency, is not likely, alone, to force the level of MT charges down to competitive levels.

Considering the objectives of regulation of MT charges, IRG concludes that accounting separation by itself is not an adequate remedy to force MT charges to a competitive level.

3.4.3.4 Price control and cost accounting

Article 13 of the Access Directive allows NRAs to impose obligations regarding price regulation and cost accounting. More specifically a NRA may, in accordance with the provisions of article 8 of the Framework directive, impose price control and cost accounting obligations if market analysis indicates a lack of effective competition and prices are at an excessively high level or cause a price squeeze to the detriment of end-users[34]. Such an obligation should promote efficiency and sustainable competition and maximize consumer benefits.

[34] Vide considerance 20 of Access Directive *'Price control may be necessary when market analysis in a particular market reveals inefficient competition. The regulatory intervention may be relatively light, …., or much heavier such as obligation that prices are cost oriented to provide full justification for those prices where competition is not sufficiently strong to prevent excessive pricing. In particular, operators with significant market power should avoid a price squeeze whereby the difference between their retail prices and the*

In an effectively competitive market, excessive margins are competed away and prices driven down to the efficient level of cost plus a sustainable margin. However, in markets where competitive forces are restricted, it can be necessary to apply ex-ante regulation in the interest of the end-user, to make sure that margins are not excessive to the detriment of consumers. A price control regime, if appropriately designed, can be a proportionate response where competitive forces and other regulation are not sufficient to ensure that operator margins are not excessive (that prices are cost reflective with a reasonable return on capital for operators).

In some countries in the European Union there are strong indications that competition in the wholesale MT market is far from effective. Firstly, the MNO can enjoy a monopoly position on terminating calls on its network. Secondly, there is a lack of sufficient countervailing buying power. The mechanism of supply or demand substitution is not functional in the MT market due to the absence of alternatives. Entry to the MT market (as defined by an existing network) is not possible for potential competitors. Given the nature of the monopoly on the mobile voice call termination market, MNOs have insufficient incentives to lower their charges to a cost based level.

This also explains why lighter remedies such as transparency and non discrimination on their own may not have the desired downward effect on MT charges.

Price regulation on the other hand targets the pricing policy of MNOs on call termination. It directly influences the level of MT charges and therefore the charges paid by other operators when terminating calls on the mobile network. Because price control targets the excessive revenue from call termination it also limits the MNO's ability to subsidize other services to its own retail customers[35]. Therefore it targets possible leverage of market power, and addresses possible price squeeze problems. The regulation of MT charges, if appropriately designed, can effectively lower MT charges and therefore limit the described distorting effects on retail markets.

Therefore it is IRG's view that, if the market analysis of an NRA shows for its national market that a MNO has a dominant position on the wholesale MT market and finds that the level of MT charges of a MNO are significantly above a competitive level, a form of price control that forces MT charges down to a competitive price level may be appropriate and proportionate in the light of the regulatory framework considering the nature of competition in the relevant wholesale MT market. Such an obligation can achieve the objectives of promoting competition and protecting the consumers interests by setting MT charges at a competitive level.

3.4.4 Conclusion

IRG recognizes that transparency measures to some extent may have a positive effect on consumer behaviour and therefore in theory could create more countervailing buyer power on the MT market. Non-discrimination (in combination with accounting separation) does lead to equal treatment of

interconnection prices charged to competitors who provide similar retail services is not adequate to ensure sustainable competition. …'

[35] It was noted that, in principle, regulation may not remove all ability to cross subsidize because cross-subsidy can occur at any MT charge above marginal cost. Regulatory price controls usually do not set charges at marginal cost, but instead aim at long run incremental cost plus a mark-up, or average cost.

competing operators and the retail arm of the MNO itself. However IRG believes that it is not likely that these regulatory measures are sufficient to achieve MT charges at a competitive level.

The Access Directive states that cost based price regulation can be an appropriate form of regulation if competition is not sufficiently strong to prevent excessive pricing. IRG finds that this can be the case for the wholesale MT market, if a NRA in its national market review establishes that:

- the relevant market is the wholesale market for terminating calls on an individual mobile network;
- at present and in the foreseeable future there is no effective competitive pressure to set MT charges at a competitive level;
- MT charges are in fact excessive, i.e. significantly above competitive level, and have or can have impact on retail markets (see paragraph 3.3).

Therefore it is IRG's view that cost based price regulation can be appropriate and proportionate. However IRG recognizes that national or market specific circumstances can justify different remedies in order to achieve a competitive level.

The form of appropriate and proportionate cost based price regulation is described in the next paragraph 4.1.

2. IRG believes that obligations imposed on MNOs should be proportionate and can range from price transparency through to charge controls and non-discrimination (supported by accounting separation) in order to set cost-oriented charges and to help prevent a MNO from discriminating against other operators.
3. IRG finds that non-discrimination and transparency obligations at the wholesale level can have effect on MT charges, but by themselves are unlikely to be sufficient to achieve the intended aim of the regulation, i.e. MT charges at a competitive level.
4. IRG believes that charge control that in the long term sets MT charges at a competitive level is proportionate and justified because this obligation can effectively prevent the adverse effects of possible lack of competition on the wholesale call termination market.

4. Defining the appropriate and proportionate cost based price regulation

4.1 Introduction

Where NRAs conclude that cost based price regulation ultimately is the regulatory measure that is most likely to effectively restrain MT charges to a competitive level, this chapter describes the appropriate and proportionate form of cost based price regulation.

The Access Directive[36] sets out that NRAs have to ensure that any price control mechanism promotes efficiency, sustainable competition and maximises consumer benefits and that NRAs shall take into account the investment made by the operator and allow him a reasonable rate of return on adequate capital employed, taking into account the risks involved.

[36] Vide article 13, par. 1, 2 Access Directive.

IRG recognizes that the principle of proportionality requires the NRA to take into account the specific circumstances in which a MNO operates in the market. Moreover the NRA has to weigh the interests of the MNO against the objectives of the regulation, i.e. forcing a level of MT charges that is optimal from a social welfare point of view.

It is IRG's view that obligations that a NRA may impose should in the long term lead to MT charges at a competitive level considering the nature of the competition problem – lack of sustainable competition on MT markets. A MNO should in the end be able to offer MT services in a competitive environment.

4.2 Price regulation

The price regulation to remedy the described competition distortion on the MT market should be designed to simulate the level of MT charges in a (hypothetical) competitive MT market.

There are different forms of price control possible and adapted throughout Europe[37], amongst which the most common are obligations to set charges:

(1) at cost orientation, e.g. FAC or LRIC;
(2) at (best practice) benchmark level;
(3) on base of a price cap, e.g. RPI minus X;
(4) at a retail minus level.

Cost orientation

Price regulation based on cost orientation determines the price of service by setting prices based on the costs of the services plus a reasonable return (on assets or capital employed). Several methods can be used to determine a cost based price level.

Fully Allocated Cost (FAC) accounting determines the price of service based upon a complete allocation of costs. The joint and common costs of production are allocated to the various categories of services, using various formulas that reflect relative usage or other factors. This method enables MNOs to fully recover its costs, but its major drawback is that it gives MNOs less incentives for efficiency.

Within FAC the MNO has more freedom of designating its common costs and any inefficiently incurred costs to MT services. FAC methods do not contain specific safeguards to prevent MNOs to dedicate specific costs of services to specific other operator's termination charges, which could possibly leave room for discriminatory pricing. Moreover FAC methods can create a heavy regulatory burden as the development of the model and the (yearly) determination of the charge level create a repeating discussion on the designation of specific costs to services.

Marginal cost pricing means that MNOs are only allowed to recover the marginal costs of the MT services. Therefore joint and common costs which reasonably can be designated to MT services cannot be recovered not even if they are efficient.

[37] Another form of regulation is applied in Australia where the price level of MT termination is directly linked to the level of retail prices. The EC regulatory framework states that retail price regulation should only be a last resort regulation in case wholesale regulation fails to remedy a competition problem.

The Long run incremental costs (LRIC) method takes into account both the marginal costs of service as well as a justified and reasonable proportion of the common and joint costs of services plus a reasonable return (on assets or capital employed) [38]. Therefore, if properly applied, LRIC will enable a MNO to earn back its costs of operation and services whilst stimulating MNOs to operate as efficient as possible. This can prevent MNOs from subsidizing its retail services by excessive profits on call termination and sets its costs of MT services at an efficient level, which would also be the case in a competitive wholesale MT market. Moreover LRIC can lead to more sustainable competition as MNOs have to recover inefficient costs at the competitive retail level, thus creating stronger incentives for MNOs to become more efficient.

Benchmark
Price regulation based on benchmark sets the level of MT charges against the average of competitive charges in sufficient other countries.

Price cap
Regulation based upon a price cap means that a NRA requires a MNO to reach a certain price level within a certain time. This ultimate price level will have to be competitive if the goal of the regulation is to be reached.

Retail minus
Alternatively NRAs could use the retail level as a reference point to determine the level of MT charges. However this method has to assume that retail prices are sufficiently at a competitive level itself or if on-net retails price are used, then there is the difficulty of establishing an efficient level of retail costs and the risk of setting a termination charge below LRIC. As it is unlikely that retail prices are in fact at effectively competitive levels such regulation would need a cost model that determines such a level. Furthermore. It has the disadvantage of tying a non-competitive service to a more competitive service and there would be a significant risk of reducing competition in the more competitive retail market.

Conclusion
As the objective of the regulation of MT charges is to ultimately create a charge level that reflects a competitive price level and considering the market conditions on the wholesale MT market (i.e. the strong monopoly of the MNO and the lack of incentives that prevent competition at present and in the foreseeable future), it is IRG’s view that in order to set prices at a competitive level, a range of costing methods could be used including the Long Run Incremental Cost (LRIC) method[39]. Such a regulation is in accordance with the goals and objectives of the regulatory framework, i.e. maximizing social welfare by promoting sustainable competition in the telecommunication market, the internal market and/or the interests of citizens of the European Union.

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[38] Within the methodology of LRIC certain choices on cost accounting principles will have to be made. The common position of IRG on these choices are not within the scope of these PIBs. We refer to the Principles of Implementation and Best Practices regarding FL-LRIC cost modelling, as formulated by IRG in November 2000. In 2003 IRG has consulted on these PIBs. Strictly speaking, the LRIC referred to here is LRIC+ because it provides for the inclusion of an element for network common costs but LRIC is used here as a convenient shorthand.

[39] Calculated using either a bottom-up or top down principle (ideally both).

IRG recognizes that an immediate implementation of charge control that sets charges at the competitive level could cause disproportionate problems for mobile operators. In such cases NRAs may apply a price cap system or a glide path to achieve a competitive level over a reasonable period of years. The reasonable period is aimed at providing a transition towards a competitive level. This period should be as short as possible without creating distortive effects on MNOs. In order to support development toward MT charges at a competitive level, and to assist NRAs in deciding on MT charges, IRG will publish a benchmark on MT charges. 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.

IRG recognizes that the transition of the present level of MT charges to a competitive level can take more or less time depending on the national situation, e.g. the transition from the present level to the competitive level may require a transitional period which can be different in terms of time and imposed obligations due to country or operators' specific issues. Where price regulation is appropriate some member states already have developed cost models and are able to determine the competitive level, others still need time to develop. NRAs may find it justified to make temporary amendments or adjustments to the general price control remedy for new players, to promote competition. These adjustments may entail the obligation to offer "fair/reasonable" prices.

5. In order to determine the competitive level of MT charges, a range of costing methods could be used including the Long Run Incremental Cost (LRIC) method[40].
6. IRG recognizes that an immediate implementation of charge control that sets charges at the competitive level could cause disproportionate problems for mobile operators. In such cases NRAs may apply a price cap system or a glide path to achieve a competitive level over a reasonable period of years. In order to support development toward MT charges at a competitive level, and to assist NRAs in deciding on MT charges, IRG will publish a benchmark on MT charges. 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.
7. IRG recognizes that national or market specific circumstances can justify different remedies in order to achieve a competitive level.

[40] Calculated using either a bottom-up or top down principle (ideally both).