Office of the Director of
Telecommunications
Regulation

Significant Market Power
In Telecommunications

Consultative paper

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Introduction

On 15 June the Director of Telecommunications Regulation ("the Director") published a paper on the ODTR website on the framework for the liberalisation of the telecommunications market by December 1998[1]. The Director welcomed the announcement by the Minister for Public Enterprise, Mrs. Mary O'Rourke T.D., that the Irish telecommunications market will be liberalised by 1 December 1998 and noted the need for her Office ("the ODTR") to move quickly to put in place the regulatory tools to facilitate this. The Director particularly emphasised the need for consultation and input from all relevant interested parties and announced that the ODTR would be issuing a number of consultative documents in that context.

Amongst the consultation papers issued recently was one on the principles which the Director intends to follow in the development of a licensing regime appropriate for a fully liberalised market[2]. That paper referred to the concept of Significant Market Power ("SMP") in telecommunications market. Furthermore, there are obligations on the Director in EU and national legislation to make certain notifications in relation to organisations with SMP on specific telecommunications markets. The definition of SMP is therefore important, as it will define those organisations that may have to comply with additional licence conditions that aim inter alia to protect against an abuse of market power.

The purpose of this paper is to obtain the views of interested parties on the proposed methodology and approach to determining organisations with SMP on relevant markets.

This document is structured as follows:

- Section 1 sets out the timetable for the consultation and the appropriate contact details;

- Section 2 sets out the legislative and regulatory background to SMP;

- Section 3 provides details of the proposed methodology for determining SMP. Comments would be welcomed on this section in particular;

- Section 4 concludes the paper.

This is not a legal document; the Director is not bound by this document and may amend it from time to time. This document is without prejudice to the legal position or the rights and duties of the Director to regulate the market generally.

[1] "Towards Liberalisation; An agenda for Ireland to achieve an effective competitive market in the provision of telecommunications services" - available on http//www.odtr.ie
[2] "Telecommunications Licensing Principles – Consultation Document" ODTR Document No. 98/21

Section 1: Consultation Procedure and Timetable

Consultation: The consultation period will run from Friday 31st July to Friday 14th August. Comments should be sent before 5pm on Friday 14th August to:

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Questionnaire: This document is accompanied by a questionnaire which is directed at operators in the telecommunications market. The information requested in the questionnaire is required by the ODTR to carry out the analysis of SMP which has been described in this document. Notwithstanding any possible amendments of the methodology following receipt and examination of comments, the information requested in the questionnaire will be required by the Director for the carrying out of her statutory functions. All licensees are asked to respond to the questionnaire by Friday 14th August – responses should be sent to the same contact name and address as above. The production of the questionnaire does not exclude the Director from seeking further information or imply that further information requests will be in the same format.

Finalisation of the Director's Position: The Director will consider comments received in response to this consultative document before publishing a final methodology which will be used to measure SMP. The Director will also publish the results of an examination of the relevant markets and a determination of what organisations have SMP on those markets.

Section 2: The Legislative Background to SMP

Functions of the Director

One of the functions of the Director as the designated National Regulatory Authority is the identification of organisations with Significant Market Power ("SMP") in four specific telecommunications markets in accordance with the powers and duties conferred on the Director by:

- Council Directive 97/33/EC on Interconnection in Telecommunications and the European Communities (Interconnection in Telecommunications) Regulations, SI No. 15 of 1998, and
- Council Directive 97/51/EC on Leased Lines and the European Communities (Leased Lines) Regulations, SI No. 109 of 1998.

The Relevant Markets

These Directives identify the four markets on which SMP is to be determined as:

Market	Definition[3]
Fixed Public Telephone Network and Services	The fixed public telephone network means the public switched telecommunications network which supports the transfer between network termination points at fixed locations of speech and 3.1 kHz bandwidth audio information, to support *inter alia*: voice telephony, facsimile Group III communications, in accordance with ITU-T recommendations in the 'T-series', and voice band data transmission via modems at a rate of at least 2,400bit/s, in accordance with ITU-T Recommendations in the 'V-series'. The fixed public telephone service means the provision to end-users at fixed locations of a service for the originating and receiving of national and international calls, and may include access to emergency (112) services, the provision of operator assistance, directory services, provision of public payphones, provision of service under special terms and/or provision of special facilities for customers with disabilities or with special social needs.
Provision of Leased Line Services	Leased lines means the telecommunications facilities which provide for transparent transmission capacity between network termination points, and which do not include on-demand switching (switching functions which the user can control as part of the leased line provision). They may include systems which allow flexible use of leased line bandwidth, including certain routing and management capabilities.
Public Mobile Telephone Services and/or Networks	A public mobile telephony network is a public telephone network where the network termination points are not at fixed locations. A public mobile telephone service is a telephony service whose provision consists, wholly or partly, in the establishment of radio communications to one mobile user, and makes use wholly or partly of a public mobile telephone network.

[3] Based on the definitions in Directive 97/33/EC.

National Interconnect Market	Interconnection means the physical and logical linking of telecommunications networks used by the same or a different organization to communicate with users of the same or another organization. Services may be provided by the parties involved or other parties who have access to the network. The European Commission has provided the guideline information that the national market for interconnection means all interconnection services on fixed and mobile networks and includes interconnection services provided by a fixed telephony incumbent operator to itself.

The geographic scope of each of these markets is the licensing area which, based on existing Irish licences, is currently the state. These four markets are referred to as the **Level 1 markets**.

Determining Significant Market Power

The Interconnection Directive states that "[a]n organization shall be presumed to have significant market power when it has a share of more than 25 % of a particular telecommunications market in the geographical area in a Member State within which it is authorized to operate" and later that "National regulatory authorities may nevertheless determine that an organization with a market share of less than 25 % in the relevant market has significant market power. They may also determine that an organization with a market share of more than 25 % in the relevant market does not have significant market power."

This applies to each of these four markets outlined above. It is therefore necessary to calculate the market shares of the firms operating in the relevant markets. The directives do not specify whether volume or value should be used. This presumption of SMP is referred to as **the 25% rule**.

Moving from the presumption of SMP to the actual determination of SMP requires that additional factors be considered. The Leased Lines Directive lists four factors to be taken into consideration:

- the organization's ability to influence market conditions;
- its turnover relative to the size of the market;
- its access to financial resources; and
- its experience in providing products and services in the market.

In addition, the Interconnection Directive adds a fifth condition, namely:

- its control of the means of access to end-users.

These are referred to as the **market power criteria**.

Section 3: Proposed Approach to the Determination of Significant Market Power

The ODTR proposes to adopt the following two level approach to the determination of SMP.

Level 1

1. Identify the four markets as defined in the Directives.
2. Calculate market shares in value and, if possible, in volume of all the organisations operating in these markets.
3. Identify organisations with a market share close to or above 25% and designate these as **candidates for SMP**.

Level 2

4. Deconstruct the four Level 1 markets into distinct relevant markets for the purposes of more detailed analysis. These will be termed **Level 2 markets**. The ODTR will be guided by existing literature on market definition, including EC guidelines.[4] The Level 2 markets will generally be within the Level 1 markets, and each one will be associated with one or more Level 1 markets. They are not geographically constrained.
5. Calculate the market shares of each organisation within each Level 2 market.
6. Make an assessment of which organisations, if any, have market power on any Level 2 markets. This assessment would incorporate the market power criteria outlined above and would not be constrained by a 25% market share rule. This is described in more detail below.

Finally, SMP would then be determined. An organisation with more than 25% of a Level 1 market and market power on all the associated Level 2 markets is likely to be designated as having SMP. An organisation with more than 25% of a Level 1 market but with no market power on any associated Level 2 market is unlikely to be designated as having SMP. In between these cases, the higher the Level 1 market share and the greater the incidence of Level 2 market power, the more likely it is that the organisation will be designated as having SMP.

It is considered unlikely that any organisation with less than 25% Level 1 market share would be designated as having SMP given the current telecommunications market structure. However, there is a possibility that as the market evolves, an organisation could have less than 25% of a Level 1 market but might have market power on a sufficient number of Level 2 markets or have very significant power within one market so as to create concern. In such a case, a determination of SMP would be possible.

[4] See the *Notice on the Definition of the Relevant Market for the Purposes of Community Competition Law* (1997) that sets out the approach that DGIV adopts to market definition.

This approach to the determination of SMP has a number of advantages.

Firstly, the EU legislation relating to SMP addresses only high level aggregate "markets" and does not prescribe how the detailed examination of markets and application of market power criteria will be taken into account by individual regulators. In particular, market power on an aggregate industry classification has not been previously defined or tested. The proposed approach provides clarity on the manner in which it is proposed to take market power criteria into account, having regard to experience and precedents.

Second, it is important to note that a designation of market power in the level 2 markets is not equivalent to dominance as defined under the case law of Article 86 of the Treaty of Rome. One reason is that the market definition undertaken here will be done from an *ex ante* perspective, a key regulatory concept required at the current stage of liberalisation of telecommunications markets in Europe generally. The proposed approach takes into account the application of competition rules in the telecommunications sector in the context of that regulatory environment. .

Third, this approach will confine SMP to those organisations that are obviously "big" in the telecommunications sector generally and also have market power on relevant markets within the sector. This is in keeping with the policy of the ODTR to be as light handed as possible in terms of the regulatory burdens imposed on licensed operators.

Q 3.1: Is this approach clear?

Q.3.2: Does the approach provide an appropriate and useful marrying of regulatory concerns and competition rules?

Level 1: Market Shares

The Level 1 analysis involves calculating the market shares on the four markets whose legal definitions are given on page above. In calculating level 1 market shares, the approach adopted has been governed by guidance from the European Commission on what may or may not be included in the calculation. The Director is anxious to apply a harmonised approach based on the Commission guidance and so has adopted a similar approach. The ODTR is aware that the Commission intends to provide written guidelines on this matter in the near future and these will of course be taken into account in the publication of the ODTR's final methodology.

In each market, the market share is calculated by value (i.e., revenue). Market shares by volume will be calculated where possible. For example, this is not possible where there are both upstream and downstream[5] markets in the same Level 1 grouping. Each market raises some specific additional issues which are reviewed below.

[5] An upstream market is one that is further removed from the consumer. In telecommunications network provision is considered an upstream market and service provision a downstream market.

Market	Measurement of Market Share
Fixed Public Telephone Network and Services	Value market shares are measured by receipts for call origination using fixed line telephones. This measures the total revenue in the market and avoids double counting. All revenue figures will be measured on the basis of a financial year from April to March. Volume market shares are only considered in the level 2 analysis.[6]
Provision of Leased Line Services	Value market shares are measured by total revenues from the leasing of national or international capacity to any retail or wholesale customer. Volume market shares are measured by the number of leased lines, weighted by capacity.
Public Mobile Telephone Services and/or Networks	Value market shares are measured by receipts for call origination using mobile telephones and receipts arising as a result of roaming agreements. Volume market shares are measured by the number of call minutes. These can be used because the market is vertically integrated. If up\downstream defined in footnote, should vertical integration also be defined?
National Interconnect Market	Value market shares are measured by receipts from call termination, regardless of the source of the calls. Specifically, call termination provided within an organisation is counted. Volume market shares are measured by the number of call minutes. This will have greater importance than value shares while accounting separation is not fully developed.

Any organisation having a value market share close to or above 25% will be termed a candidate for SMP. If there is a large discrepancy between value market shares and volume market shares, this will be taken into consideration.

Q 3.3: These are the measurement mechanisms the Director is obliged to use. Is their application within the above framework appropriate for level 1 analysis?

Level 2: Definition of Markets

This is the first step of the Level 2 analysis in which the four markets above are deconstructed into markets on which competition may be analysed.

As stated in footnote above, these markets will be defined in accordance with the existing practice and in particular the guidelines provided by the European Commission. In summary, these ensure that a market is defined according to demand and supply substitutability. Thus a market should include all the products (or services) that are close substitutes in demand or in supply. A close substitute in demand is a product that customers could readily switch to in response to a small but significant increase in the price of a product they would or do buy. A close substitute in supply is a product that, with minor modification, could become a substitute in demand.

[6] It is not meaningful to add units of network and services.

Because of the complexity of telecommunications markets, both markets and sub-markets are designated. The former will be a broader categorisation that will include several sub-markets. There are two reasons for this approach.

First, in many cases where market power exists, it exists over all the possible sub-markets so that detailed dis-aggregation would not be necessary. For example, the market for terminating calls on the local loop may be made up of a series of local geographically determined markets. Market power might be possible on each of these, but if the market structure is very similar across all of them, dis-aggregation is not required. If the market structure changes, these sub-markets could be dis-aggregated in the future.[7]

Second, ambiguity about the extent of substitutability in supply or demand may arise, particularly on the supply side where the ease of modification may not be clear and where technical change may make modification easier in the future. In other cases, the ambiguity may concern how long it would take for substitution to occur. Where there are ambiguities, the following procedure is adopted: [8]

- define the relevant market broadly to include any "ambiguous" substitutes in demand or supply;
- define sub-markets of this relevant market which do not include the ambiguous substitutes.[9]

The adopted approach therefore is to define market power only on the markets, without going to the level of sub-markets. However, the sub-markets will give an indication of the possible markets that could be defined in future and data on market shares on sub-markets will sometimes be collected. This is a flexible approach to *ex ante* market definition in that it takes into consideration the fact that market definitions may change over time.

Q3.4: Is this an appropriate methodological approach to defining telecommunications markets? Is it clear?

Level 2: Deconstruction of Markets

For each of the four markets outlined above, the associated relevant markets for the level 2 analysis are examined below.

Fixed Public Telephone Network and Services

The upstream and downstream markets are clearly distinct, even if they are frequently supplied in an integrated fashion. That is, services are not substitutes for network and *vice versa*.

The upstream network level is considered first. The emphasis here is on the physical network and, in particular, on all network links including switching and other equipment that enables these links to provide service.[10] Three types of **network** that are not substitutes in supply or demand are defined. These are as follows:

A International All (fixed, radio, satellite, etc.) links from telephone networks

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[7] It should be noted that if a new entrant manages to acquire a high market share, this would indicate that barriers to entry were low and therefore it would not be likely that market power could exist.

[8] The rapid pace of technical change means that specific market definitions may have a short shelf-life. The Commission raises this issue in its *Notice on Access* at paragraph 47. The method is adaptable to change, especially as technical developments alter substitutability in supply.

[9] In determining market power on a sub-market, the "ambiguous" substitutability could be a factor limiting the extent of market power.

[10] We do not consider separate markets in technological equipment because these are standardised under the ONP provision. We do not separate out ducting etc. as a separate (further upstream) market for the conduit of cable and radio links, but we do ask questions about such conduits within each network market.

	Network	contained within the jurisdiction of Ireland to networks in other jurisdictions.
B	**Trunk Network**	Fixed-line and point-to-point radio links between local (and trunk) exchanges in the State.
C	**Local Network**	All links from a switching exchange to fixed end points (customers).

The letters used in these market definitions are primarily designed to link with the questionnaire, but will also be referred to in this document.

In general, demand for network comes from downstream service providers either directly or indirectly via other network owners who wish to provide a more comprehensive network to downstream service providers. Each of these markets A-C has little or no substitutability in supply or demand. For example, a service provider who could not buy trunk network would not consider local network a substitute and the suppliers of local network (who have no trunk network) could not easily switch that local network into trunk network.

Distinct demand can be identified for call termination and call origination which are clearly not substitutes in demand. It is not clear whether, at the upstream level, these are yet (or ever will be) substitutes in supply. We propose to define a single network market for both termination and origination because the potential for supply substitutability exists. Nevertheless, because there is some ambiguity about the strength and extent of this supply substitutability, the Director retains as an option the possibility that sub-markets exist for origination and termination.

Q 3.5: Are these the appropriate markets which exist within the fixed public telephony and services market? Are there additional arguments in favour of defining the call origination and call termination markets separately?

Within the local network, three different capacities of links may be identified.[11]

C1	**Local Network: Low Capacity**	up to 64K (or its analogue equivalent i.e. a 3.1 KHz circuit)
C2	**Local Network: Medium Capacity**	n × 64K where 1<n<30
C1	**Local Network: High Capacity**	n × 2mbit/s

There is clearly a distinct demand for each of these types of link, so the question of whether they are distinct relevant markets depends on supply substitutability. This turns on the (typically upward) substitutability of one product for another. At present, converting low capacity into medium or medium into high is costly so that substitutability is not perfect. The Director therefore suggests that market power would be possible on any one of these markets separately.

Q 3.6: Is this an appropriate approach to segmentation of the local network? Are there alternative approaches?

In addition to the product dimension of the market, there is the geographical aspect. The scope of all the markets under consideration does not extend beyond the state because of licensing. However, there is the possibility of geographical sub-markets within each market. In international networks, each destination could be identified as a separate market. However, the myriad routing possibilities and competition on the international network generally suggest that there is substitutability. In trunk network, routing substitutability is also possible so that defining markets by route would not be appropriate. Finally, geographical markets could exist in the local loop. In other words, market power on the local loop in Cork would not be constrained by the existence of local loop elsewhere in the country. Thus there is a range of geographically distinct sub-markets. However, given the virtually identical market structure across these local loops, they are not analysed separately.

Q3.7: Is it appropriate not to analyse geographic markets separately at this time? When might geographic markets become an important issue?

We now turn to the downstream or service market. Many of the distinctions that have been made in networks carry through to services. In general, if the network is the source of the market power, the identification of every possible market at the downstream level will not necessarily be of concern. A general downstream market is defined as follows:

D1	**Originating fixed line telephone services**	All calls originated from a fixed line connection regardless of destination. This includes data and voice.

This is the fundamental downstream market in the sense that it includes all revenue in the market. However, call termination may exist as a distinct market, and a further market, namely that for call origination services, is suggested. There may be less substitutability between these markets than at the network level because of the cost to customers of changing service provider, numbering costs and scale economies in service provision .

D2	**Terminating fixed line**	All calls terminated on a fixed line connection

[11] This is less important on trunk or international network where capacity is generally high.

telephone services	regardless of origination. This includes data and voice.

There is distinct demand for data and voice. Substitutability in supply depends on switching equipment. In general, voice telephony switches can be used to supply data, but the reverse is not necessarily true.[12] The existence of these sub-markets is taken into account.

Substitutability from mobile services to fixed services is likely to increase over time but, at the moment, is not sufficient to consider them in the same relevant market.

Sub-markets for different types of capacity according to demand are reflected in and taken account of in the definition of upstream local loop. If there is no market power in local loop or other networks, or there is equal access available to all service providers then there would be better supply substitutability.

Q 3.8: Is it appropriate to define separate markets for call origination and call termination in service provision?

Provision of leased line services

The provision of leased line is primarily a network activity, although a small amount of service is also provided (e.g., billing). Distinct demand for a leased line exists because it is priced at a fixed fee. A switched product priced according to usage is not likely to be a close substitute for the majority of buyers. However, on the supply side, there would appear to be substitutability from switched network products into leased line products. For example, the owner of a local network that provides a switched high capacity service could easily provide a non-switched product and charge it as a leased line. Substitutability in the opposite direction (e.g., from leased lines to local network) would not be so strong because the higher switching requirements might require investment.

For this reason, the leased line market is not clearly distinct from other network markets. It would be difficult to argue that market power in leased lines would be unchallenged by competition from local or trunk network. It is proposed that the relevant market for analysing competition is the local network and, in particular, the high capacity local network (C3 above) as this is the most likely source of supply substitutability. Trunk networks would also offer supply substitutability. However, in order to maintain consistency with the markets as defined at level 1, information will be collected on leased lines in the questionnaire. To this end, a sub-market of the local network called the leased lines market is defined as follows:

E	**Leased Lines**	Client-dedicated (i.e., client-to-client) network, whether stand-alone or as part of a network managed by a client.

Q 3.9: Is this an appropriate treatment of the leased line market?

Public mobile telephone services and/or networks

Many of the issues in deconstructing relevant Level 2 markets in public mobile telephone services and/or networks are similar to those raised in the fixed network and services market. There is both an upstream network and a downstream services market that are not substitutes for each other in supply or demand.[13]

[12] An example where a data network can carry voice is IP telephony and example where it cannot is an X.25 network.

[13] Given the high level of vertical integration, market structure and market power are likely to be very similar on both markets.

F	**Mobile Network**	Links from individual customers in mobile locations to a switching exchange plus the links (if any) between switching exchanges.[14]
G	**Mobile Telephone Services**	All calls originated from a mobile connection regardless of destination. This includes data and voice.

The network is a single market without a local/trunk distinction and the geographical market is the country. The demand comes from downstream service providers (both analogue and GSM) and there are no close substitutes in demand or supply.

The demand for mobile telephone services is distinct and there is no substitute in supply or in demand. Satellite operators, together with cellular operators, would be included in this market should they provide mobile services in Ireland. Within this market, there is distinct demand for GSM and analogue services because of their different characteristics (international roaming, security, quality, etc.). Because GSM is a superior product, it may offer greater competition to analogue than *vice versa* but this may not be sufficient to prevent market power on analogue. These are not substitutes in supply for regulatory reasons. Thus, these should be considered as distinct markets.

The market for call termination is clearly distinct from the market for call origination. Arguments about voice vs. data and capacity are as for services over fixed line but are even less relevant for this market.

There are thus four sub-markets in mobile telephone service:

G1	**Mobile Service: GSM originating**	Calls made from mobile handsets using GSM (digital) technology.
G2	**Mobile Service: Analogue originating**	Calls made from mobile handsets using analogue technology.
G3	**Mobile Service: GSM terminating**	Calls received by mobile handsets using GSM (digital) technology.
G4	**Mobile Service: Analogue terminating**	Calls received by mobile handsets using analogue technology.

Q 3.10: Are these the appropriate markets within the mobile service sector?

National interconnect market

It is not clear that there is a market for interconnect *per se*. Rather, interconnect refers to access to network markets defined above. By considering each network market separately and identifying the different sources of demand, and by defining separate markets for call termination and call origination at the services level, market power in interconnect can be captured. It is thus proposed not to identify any further markets, but to note that the level 2 markets to be associated with interconnect are the network markets in general and the markets for call termination at the downstream level (as these measure revenues on the upstream network markets that are due to interconnect).

Q 3.11: Is there a more clearly definable market for interconnection that would be consistent with this level 2 analysis? If so, how should it be measured?

[14] These connections are included where they are exclusively used for mobile. Where fixed trunk network is used for mobile and fixed line services, it belongs in market B (fixed trunk network) and is input into mobile service provision.

Summary
The defined markets are summarised as follows:

Level 1 Markets	Fixed public telephone network and services	Provision of leased line services	Public mobile telephone services and/or networks	National interconnect market
Level 2 Markets	A. International Network		F. Mobile Network	A-C, F are relevant
	B. Trunk Network		G1. Mobile Service: GSM originating	D2, G3, G4 used to measure revenues
	C. Local Network		G3. Mobile Service: GSM terminating	
	D1. Originating fixed line telephone services			
	D2. Terminating fixed line telephone services			
Level 2: Sub-Markets	C1. Local Network: Low Capacity		G2. Mobile Service: Analogue originating	
	C2. Local Network: Medium Capacity		G4. Mobile Service: Analogue terminating	
	C3. Local Network: High Capacity	E. Leased Lines		

Level 2: Measurement of Market Shares

This table outlines the information that will be collected to measure market shares on the relevant markets.

A	**International Network**	Volume market share is measured by the number of links weighted by capacity in terms of 2mbits/s equivalent circuits. The questionnaire asks about the number of routes, the number of fibres per route and the number of 2m/bits equivalent (lit and unlit) circuits, by destination.
B	**Trunk Network**	Volume market share is measured by the number of links between exchanges, weighted by the connection capacity of such links. The questionnaire asks about the number of routes, the number of fibres per route and the number of 64K equivalent and

	2mbit/s equivalent circuits and the number of point-to-point radio links in 2mbit/s equivalents.
C Local Network	Volume market share is measured by the number of end points (directly connected customers) weighted by capacity. Ducting will also be measured to gauge capacity. The questionnaire asks about ducting not in use for telecommunications services in order to measure spare ducting capacity. The questionnaire requests the number of analogue voice channels plus the number of 64K equivalent voice channels. It will also ask about km of duct and duct occupancy.
D Telephone services over fixed line	Volume market share is measured by the number of direct and indirect subscribers and the amount of traffic in call minutes. Value market share is measured by retail revenues. The questionnaire asks about the number of calls, the number of minutes, the amount of retail revenues split between local, national and international services. These details are also broken down into business and residential customers. Information is also requested that will enable the calculation of market shares volume for originating and terminating services.
E Leased Lines	Value market share is measured as the revenue, broken down into set-up charges and annual fees. Volume market share is measured by the number of leased lines, weighted by capacity. The questionnaire will ask about the number of various types of leased lines including analogue, $n \times 64K$, 2mbit/s, >2mbit/s, and 10mbit/s LAN Extensions. The questionnaire also asks about installation charges and annual rentals
F Mobile Network	Volume market share is measured by the number of customers and coverage both in terms of land area and population. The questionnaire will ask about the number of customers (Analogue and GSM[15]), the geographical coverage, and other aspects of the fixed infrastructure. There will also be a question on mast sharing.
G Telephone Services over Mobile	Volume market share is the number of direct subscribers and the amount of traffic in call minutes. Value market shares are retail revenues. The questionnaire asks about the number of subscribers and retail revenues split between business and residential customers. It also includes questions concerning airtime revenues. As other service providers and resellers are a large part of this market, the questionnaire asks about revenues from and payments to the latter. In addition, it addresses handset subsidies and other purchase incentives. All revenues from roaming agreements

[15] A question about DCS will not be included this time because there is no DCS yet in use in Ireland.

will be measured.

Q3.12: Are these the appropriate measures to employ? What other measures could be used?

Level 2: Determination of Market Power

As stated earlier in this document, the determination of market power on the level 2 markets is carried out in accordance with existing precedent and Commission guidelines. It is always subject to the level 1 analysis which is in accordance with the concept of SMP in telecommunications legislation.

Because the level 2 analysis is required as a support to the level 1 analysis and as input into a final determination of SMP, it is not proposed to constrain this analysis by a market share criterion or by the geographical limit to licences.

Market power is defined as the ability of a firm to raise its price and to earn a monopoly rent that is not eroded away in the longer term (say a year or longer). Thus, for a firm to have market power, it must be the case that:

- Competitive pressure from outside the market is weak (i.e., barriers to entry exist); **and**
- Competitive pressure on the market is weak (i.e., a high market share and competition absent).

These two conditions take full account of the market power criteria outlined at page 5 above. These are dealt with in turn.

Weak Competition from outside the market.

This requires that there be a **barrier to entry**. Stigler's definition as a cost that an entrant must bear that an incumbent does not is generally accepted as a minimum definition. In other words, anything that can be classified as cost advantage to the incumbent constitutes a barrier to entry. In addition, it is argued that first mover advantage and strategic commitment may act as a barrier to entry even if there is no fundamental cost difference between the firms. This means that a barrier to entry can arise because of an absolute cost advantage or because of strategic first mover advantage. A third possibility for entry barriers is predation. Many economists have argued that predation is rarely a threat, but financial strength would be an important factor in enabling it if it does occur.

In the light of these comments, the following factors will be examined with regard to determining barriers to entry in the market:

- Legal barriers to entry;
- Economies of scale;
- Economies of scope;
- Patents and intellectual property;
- Vertical integration (especially access to distribution);
- Brand promotion (sunk cost);
- Product proliferation (sunk cost);
- Advantages on labour input markets: wage bargaining and non-compete clauses;
- Advantages on other input markets;

- The cost to a user of moving between suppliers (particularly pricing policy, such as bundling, full-line forcing, quantity discounts, loyalty discounts);
- Financial strength.

Q 3.13: Are these the appropriate factors to consider when deciding if there is a barrier to entry into the market? What other factors should be considered?

Weak Conditions of competition within the market

The factors to be considered here are:

- Price Rivalry;
- The cost to a user of moving between suppliers;
    - lack of number portability;
    - inherent brand loyalty;
    - loyalty enforced by long-term contracts with penalty clauses;
    - loyalty enforced by bundling with other products; and
    - quantity discounts;
- Buyer Power;
- Legislative barriers to price competition;
- Price Issues;
    - Price discrimination; and
    - Excessive complexity that prevents direct price comparisons.

Q 3.14: Are these the appropriate factors to be taken into consideration in deciding if there are conditions of competition within the markets? What other factors could be considered?

In all of the above, the time scale is very important. Short term market power is not of importance if the market will erode it before it can be diagnosed. The emphasis of this methodology is on identifying long-term market power that is not likely to be threatened by competitive forces.

Conclusion

In conclusion, this methodology for determining Significant Market Power is proposed by the Director for comment by interested parties. The Director considers the concept of Significant Market Power to be a very important one for the regulation of the telecommunications market, both now and in the future. This methodology has been prepared with a view to being comprehensive, clear and accurate with the flexibility to be amended having regard to the changing structure and nature of the telecommunications market in Ireland and globally.

Q 3.15: Are there any other issues which should be included in a methodology to determine Significant Market Power in the relevant telecommunications markets?