DOCUMENT TITLE AND APPROVAL PAGE

DOCUMENT NUMBER: Tel 2004/10

DOCUMENT TITLE: DECISION ON ASSESSMENT OF DOMINANCE IN MOBILE CALL TERMINATION

1. PURPOSE OF DOCUMENT

This Determination Notice sets out the Office's decisions regarding its assessment of dominance in the markets for wholesale mobile voice call termination. In particular, this document addresses the wholesale mobile voice call termination interconnection markets for local fixed to mobile calls, mobile to mobile calls as well as the termination of international traffic on domestic mobile networks.

RECORD OF REVISIONS

Revision Number	Description	Date

APPROVAL

This Determination is approved by the Office of Utilities Regulation and becomes effective on **September 2, 2004.**

By Order of the Office:

....
J. Paul Morgan
Director General

September 2, 2004
Date

Office of Utilities Regulation

Assessment of Dominance in Mobile Call Termination

Determination Notice

September 2, 2004

Abstract

The Office of Utilities Regulation (the Office) has a duty to "…determine which public voice carriers are to be classified as dominant public voice carriers for the purposes of the Telecommunications Act [2000]" (Section 28(1)). Dominance is as defined in Section 19 of the Fair Competition Act, 1993.

The Office is of the opinion that the existence of effectively competitive telecommunications markets should lead to higher quality of service and prices that are more reflective of costs. The existence of dominant carriers in the Jamaican telecommunications markets suggests that the existing quality of service is likely to be lower than in effectively competitive markets and/or higher prices than in effectively competitive markets. To protect the interest of the customers, the OUR believes that regulations should be imposed where it is prescribed by the Act and it is demonstrated that these are justified, and that such regulation should reflect the level of competition in the relevant markets. Equally, the OUR must have due regard for the interest of carriers and service providers and seek to promote rules that create, maintain and enhance a competitive environment, as excessive regulation can reduce the incentive to invest and to innovate. Therefore, the Office should ensure that these functions are balanced, since a failure to do so could have detrimental welfare effects.

This Determination Notice sets out the Office's decisions regarding the Consultation on the "Assessment of Dominance in Mobile Call Termination".

CONTENTS

CHAPTER 1: INTRODUCTION

1.1 The OUR's consultation on dominance in the local telecommunications markets commenced in March 2000. In August 2003, the Office issued its Determination Notice regarding the fixed telecommunications network markets in which Cable and Wireless Jamaica was declared dominant. Prior to publishing this Determination Notice, the Office issued three Consultative Documents on the issue of Dominant Public Voice Carriers.

1.2 In relation to mobile termination, the Office indicated that it would commission an independent telephone customer survey to test the validity of claims made by Mossel Jamaica Limited (Digicel) in relation to the definition of the relevant market(s).

1.3 In addition to claiming that there is a single market for call termination[1], Digicel also claimed that any determination of dominance in relation to mobile call termination must consider:

- Buying power of corporate customers and
- Substitution between mobile call termination and SMS, e-mail and call-back services.

1.4 Responses to the Office's consultative documents[2] on this issue as well as comments on responses were received from Digicel, and Cable and Wireless Jamaica Limited (C&WJ). Responses were also received from both parties on the OUR's comments.

1.5 Additionally, the Office received responses from:

- The Fair Trading Commission (FTC);
- Infochannel
- Reliant Enterprise Communications Limited; and
- The Ministry of Commerce, Science and Technology.

1.6 On March 30, 2004, the OUR issued a Supplementary Consultative Document titled "Assessment of Dominance in Mobile Call Termination". Responses were submitted by Mossel Jamaica Limited (Digicel) and AT&T. Comments on the responses were received only from Digicel although an extension was granted to this phase of the consultation based on a request from C&WJ.

[1] Call termination is the service of delivering calls to the intended destinations on a voice network (fixed or mobile).

[2] See Dominant Public Voice Carriers, 2000, Dominant Public Voice Carriers No. 2 Consultative Document, Nov. 2002 and Dominant Public Voice Carriers No. 3, April 2003 .

1.7 It should be noted that, based on the extensive response received from Digicel, the Office also extended the consultation to give respondents, the Fair Trading Commission and other interested parties the opportunity to comment on both the response from Digicel and that from AT&T. This also gave the Office additional time to carefully review these responses before commencing preparation of this Determination Notice. **Before issuing a determination on this matter, the Office again consulted with the Fair Trading Commission and took account of recommendations made by that Commission.**

Regulatory Framework

1.8 The Office has a duty to determine which public voice carriers are to be classified as dominant public voice carriers for the purposes of the Telecommunications Act (2000) (the Act), as stated in Part V section 28. This duty is consistent with the Office's functions of promoting competition and protecting the interest of consumers as outlined in Part VII of the Act.

1.9 According to Section 29(4) of the Act, "The Office may, either on its own initiative in assessing an interconnection agreement, or in resolving a dispute between operators, make a determination of the terms and conditions of call termination, including charges." Further, based on Section 30 of the Act:

(1) "…A dominant public voice carrier shall provide interconnection in relation to a public voice network in accordance with the following principles -

(a) the terms and conditions under which it is provided shall be -

(i) on a non-discriminatory basis;

(ii) reasonable and transparent, including such terms and conditions as relate to technical specifications and the number and location of points of interconnection; and

(iii) charges shall be cost oriented and guided by the principles specified in section 33;

(b) no unfair arrangements for cross subsidies shall be made;

(c) where technically and economically reasonable[,] interconnection services shall be so diversified as to render it unnecessary for an interconnection seeker to pay unreasonably for network components or facilities that it does not require;

(2) Each dominant public voice carrier shall keep separate accounts in such form and containing such particulars as will enable the Office to

assess whether that carrier provides interconnection services in accordance with the principles specified in subsection (1)."[3]

1.10 Before making a determination of dominance the Office is required to invite submissions from members of the public, and consult with and take account of recommendations made by the Fair Trading Commission (Section 28(2)). In keeping with the requirements, there were extensive consultations with the FTC through a process of meetings and consideration of the written and oral comments submitted by that agency. In addition, the OUR also submitted this Determination Notice to the FTC and held a consultative meeting on July 30, 2004 to discuss its contents.

1.11 Section 19 of the Fair Competition Act (FCA) states that, "… an enterprise holds a dominant position in a market if by itself, or together with an interconnected company, it occupies such a position of economic strength as will enable it to operate in the market without effective constraints from its competitors or potential competitors." This means that the analysis of dominance must take place in a defined relevant market and should demonstrate that an entity has sufficient market power that enables it to act (by itself or with an interconnected company) without being effectively constrained by its competitors or potential competitors.

Consequence of a Declaration of Dominance

1.12 The main consequences that can flow from a declaration of dominance are listed below:

- Price Cap as per Section 46
- Competitive Safeguard as per Section 35
    - (i) Separation of accounts;
    - (ii) Keeping of records;
    - (iii) Provisions to ensure that information supplied by other carriers for the purpose of facilitating interconnection is not used for any uncompetitive purpose;
    - (iv) Such other provisions as the Office considers reasonable and necessary for the purpose of competitive safeguard rules.
- The application of interconnection principles related to dominant public voice carriers as set out in Section 30 of the Act;
- Each dominant carrier shall lodge a RIO with the Office as per Section 32 of the Act;
- Possible subjection to rules which the Office may make subject to affirmative resolution, imposing on a dominant carrier, the

[3] See Section 30 of the Act.

responsibility to offer a particular form of indirect access to its network to other interconnection providers; and

- The Office may also make rules subject to affirmative resolution, prescribing the system of regulatory accounts to be kept by a dominant carrier or service provider in relation to specified services.
- The Office may make competitive safeguard rules inclusive of accounting separation rules as provided for at Section 35(1)(a) of the Act.

1.13 For the avoidance of doubt, the Office will ***not*** impose any of these conditions without consultation on how and whether they should be implemented.

Purpose of this Document

1.14 This Determination Notice sets out the Office's decisions regarding its assessment of dominance in the markets for wholesale mobile voice call termination. In particular, this document addresses the wholesale mobile voice call termination interconnection markets for local fixed to mobile calls, mobile to mobile calls as well as the termination of international traffic on domestic mobile networks.

CHAPTER 2: OUR COMMENTS ON RESPONSES

2.1 Throughout the Office's consultation, the important question considered was, if carrier **'A'** wants to terminate a call destined for a customer on carrier **B's** mobile network, what are the alternatives to the purchase of mobile voice call termination service from carrier **'B'**?

2.2 The Office's analysis in its Consultative Document (*Assessment of Dominance in Mobile Call Termination - March 30, 2004*, Tel: 2004/03) points to the fact that there are no effective demand and supply side substitutes for call termination on any given mobile network. That is, mobile voice call termination to each mobile operator's network constitutes a separate market. Hence, the relevant markets are:

- wholesale market for voice call termination on Mossel's (Digicel's) mobile telephone network
- wholesale market for voice call termination on Cable and Wireless' (C&WJ's) mobile telephone network
- wholesale market for voice call termination on Oceanic Digital's (ODJ's – formerly Centennial) mobile telephone network.

2.3 The Office's analysis also concluded that mobile operators' pricing in the relevant markets for wholesale voice call termination of domestic or international calls on a given mobile operator's network is unconstrained by competition. This conclusion was based on an assessment of the economic characteristics of mobile call termination, market share, entry barriers, prices, cost and profitability.

2.4 The Office has received two responses to its Supplementary Consultative Document from Digicel and AT&T. Additionally, Comments on responses were received from Digicel. The Office's comments below will address these responses and comment.

Assessment of Dominance

2.5 On pages 66-67 of its response, Digicel stated that they do "…not believe that the OUR can have given sufficient attention to writing this section [Assessment of Market Power and Dominance] of its document as it does not stand up to a reasonable critique."

2.6 To respond to this statement, we restate the relevant section of the Act and elaborate as follows. Section 28 of the Telecommunications Act 2000 states that:

(1) Subject to subsection (2), the Office shall determine which public voice carriers are to be classified as dominant public voice carriers for the purposes of this Act.

(2) Before making a determination under subsection (1), the Office shall -
(a) invite submissions from members of the public on the matter; and
(b) consult with the Fair Trading Commission and take account of any recommendations made by that Commission. (See paragraph 1.10 above).
(3) A dominant public voice carrier may at any time apply to the Office to be classified as non dominant and the Office shall not make a determination in respect of that application unless it has invited submissions from members of the public on the matter and has taken account of any such submissions.

2.7 Two points are worth noting. Firstly, the Office cannot make a Determination in relation to dominance without consulting with the Fair Trading Commission (FTC) and take account of any recommendations made by that Commission. Any written responses or comments submitted by the FTC in relation to a consultative document on dominance, or information submitted in relation to the public consultative process on the assessment of dominance, were published along with the other responses and comments from interested parties. Where it was not possible to post a document on the OUR's website, the interested parties and the FTC were informed of the document's availability at the OUR's Information Centre. Also, the Office wishes to note that the FTC was consulted specifically and not generally.

2.8 Secondly, the Office is obliged to determine which public voice carriers are to be classified as dominant public voice carriers for the purposes of the Act. The process of making this determination involved an examination of the relevant market(s) for dominance. However, this examination is not equivalent to a determination of dominance as suggested by at least one respondent. Further, for the avoidance of doubt, an assessment of dominance in a relevant market could have yielded a determination of dominance by a carrier or carriers, and/or a determination of non-dominance in relation to other carrier or carriers.

Cost Based Termination Rates

2.9 AT&T expressed concern "…that the Consultative Document makes no reference to the use of long run incremental cost analysis, which best ensures cost-based pricing by dominant carriers, because it best replicates prices that would be charged by carriers subject to competitive market pressures."[4]

[4] See AT&T's response to Tel 2004/03.

2.10 It is true that the consultative document does not address this issue. However, the intention is to complete the assessment of dominance before contemplating a particular methodology for determining cost-based termination rates for mobile operators where it is determined that this is necessary.

2.11 For the avoidance of doubt, where it is determined that a carrier(s) is (are) dominant in mobile call termination, the Office will commence consultation on cost-based call termination rates for that (those) mobile carrier(s). Additionally, there would also be consultations on the other obligations that flow from a declaration of dominance.

Data Collection

2.12 In its response, Digicel noted "…the OUR has acknowledged the importance of data collection to the process of assessment of competition in markets yet it plans to initiate this process only after a declaration of dominance." "…The OUR has relied on very limited data in coming to sweeping conclusions. Digicel is not aware of any data collection process in conducting this review."

2.13 In order to conduct the market analysis and an assessment of dominance in relation to mobile call termination, the Office considered the characteristics of voice call termination as well as the price and cost of providing the service. Contrary to the suggestion of at least one carrier, the Office can use information collected for one consultation process to carry out analysis in another consultation process. Further, based on Section 29 (5-6) of the Act, the Office may base a non-dominant carrier's call termination charges on the call termination charges of another carrier. Prior to this Determination Notice, a declaration of dominance had not been made for any mobile carrier. Within the confines of the Act, the Office has used costing data supplied by C&WJ to estimate call termination charges for other mobile carriers or operators in Jamaica. During a parallel consultation on interconnection rates, the Office had requested a similar set of costing information from Digicel but only C&WJ provided the said data.

2.14 The Office has estimated the cost of call termination based on cost data from C&WJ with an adjustment for the cost of spectrum. Retail prices for FTM and MTM and other calls as well as other relevant information are in the public domain. Thus, although the Office has requested and received some data from carriers during this consultation process, the Office can and has used information that is publicly available and in some instances, obtained through other regulatory and consultative processes. The Office has provided its assessment of the industry structure (based on retail access) in the form of market concentration and has also presented and assessed data on consumer behaviour.

Selective Use of Survey Data

2.15 According to Digicel (see page 100 of their response)[5], in the response to question 29[6] of the recent survey (http://www.our.org.jm/telecomsurveys.asp), 65% of respondents thought that the cost charged to others for calling a customer was very important. Based on the survey results, this figure is actually correct. However, the Office is at a loss in relation to Digicel's conclusion that this answer "…is completely at odds with the OUR's findings that there is a market for mobile call termination." Further, as noted in the previous paragraph, when deciding on the purchase of a mobile phone (that is locked into a particular network) only 9.1% of the householders surveyed indicated that they consider the cost of others calling them. The Office considers that this response is more reflective of consumers' behaviour since it reflects the decision to purchase a phone. In fact, when asked what are the most important things that are taken into consideration when deciding on a service provider (question 15) only 1.9% said they consider the cost of others calling them.

2.16 It is hypothesized that corporate user groups could use their buying power to pressure their mobile supplier to reduce its call termination charges. This implies that the buyer power of corporate customers could constrain the pricing of a given mobile operator's termination service as in the case where competition is present. That is, the volume of such purchases is used to constrain the mobile operator from setting the price for its mobile termination services above the "competitive price".

2.17 Based on the corporate survey data, 78.2% of the respondents indicated that they are not members of a user group. The Office notes that even in cases where user groups traffic is significant, operators can simply offer these subscribers special retail tariffs to ensure that these calls remain on-net and maintain above cost pricing for the 78.2% of respondents that are not members of user groups. This separation allows the mobile operator to minimize any pricing pressure that might come from the more price sensitive users (corporate subscribers). The residential subscribers (the larger of the two groups) have no such buying power.

2.18 In the case of the corporate user where FTM calls retail at a higher rate than on-net MTM calls, mobile operators can convert FTM call to MTM on-

[5] http://www.our.org.jm/PDF-FILES/Digicel%27s%20Response%20May%2012%202004%20without%20confidential%20info.pdf

[6] The question reads; how important to you is the cost of others calling your mobile phone?

net calls. This can be achieved by programming the private automatic branch exchange (PABX) to automatically route calls dialed from a fixed phone to a mobile phone on to the mobile network as on-net MTM calls. Thus avoiding the high cost of FTM calls. However, the average consumer who is not a member of a user group would not get this benefit.

Misrepresentation of Digicel's Pricing Data

2.19 Digicel indicated that "…What data the OUR has referred to has been misinterpreted on several occasions, in particular with respect to Digicel's pricing." It is suggested that real termination charges should be examined.

2.20 OUR agrees that an assessment of real termination charges can prove useful in an assessment of dominance in voice call termination markets. However, it makes no sense to consider such prices in a vacuum. The trend in real prices must be compared with a trend in real costs.

2.21 On page 11 of Digicel's response, the issue of whether falling prices over time are indicative of competition in the market was raised (also see the discussion on page 55 and on pages 73-74 and on page 77). The fact is falling prices could occur even under monopoly pricing and profit maximizing conditions if costs of production are shifting down due to technological change. Therefore, the Office does not consider that falling (real) prices are necessarily conclusive evidence of the existence of competition in the market.

2.22 Further, on page 86 of its response, Digicel indicated that "…in accordance with our increasing Volumes [,] Digicel has begun to experience cost savings with respect to termination and **has been able to significantly reduce costs for all its termination services in real terms** [OUR's emphasis] – but such reductions have had to be passed on to consumers in order for Digicel to remain competitive. This has occurred against a backdrop of increasing operating expenses in accordance with rising inflation rates and associated, with among other things, with increased wage demands."

2.23 In its last consultative document, the Office gave an estimate (in nominal terms) of the cost of mobile voice call termination in Jamaica. Although the Office does not have details of the cost of providing this service on all operators mobile networks, it is obvious from the statement above that, Digicel conceded that the costs of termination have declined significantly for all its termination services in real terms.

2.24 Also, the Office notes that Ofcom, has estimated that call termination costs in the UK have declined significantly between 2001/02 and 2003/04, and are projected to decline further in 2004/05 and 2005/06.

<u>Table 1:</u>
OFCOM'S LRIC MODEL ESTIMATES FOR VOICE CALL TERMINATION

Pence per minute (real 2000/01)	***2001/02***	***2002/03***	***2003/04***	***2004/05***	***2005/06***
900/1800MHz operators					
Resulting LRIC+	6.03	5.58	4.72	4.43	4.50
1800MHz operators					
Resulting LRIC+	7.19	6.58	5.40	5.01	5.10

Source: http://www.ofcom.org.uk/consultations/past/wmvct/wmvct.pdf

2.25 For the avoidance of doubt, the information in Table 1 is provided only to demonstrate that the cost of providing mobile voice call termination service has declined in real terms in other countries. The Office is convinced that the cost of mobile voice call termination has also declined in real terms in Jamaica as admitted by Digicel. However, the magnitude of any such decline can only be determined by a detailed examination of the cost of providing wholesale mobile voice call termination service in Jamaica especially given the fact that Jamaica maintains a positive inflation differential with developed countries such as the UK.

2.26 In relation to Digicel's statement on page 86 that it had to pass on the real cost savings on the provision of mobile voice call termination service to consumers in order to remain competitive, the Office notes that no competitive service was identified. The pertinent question continues to be, if carrier **'A'** wants to terminate a call destined for a customer on carrier **B's** mobile network, what are the alternatives to the purchase of mobile voice call termination service from carrier **'B'**?

Prices, Bad Debt, and Excess Profit

2.27 On page 82 of Digicel's response, Digicel suggests that it is appropriate to subtract a bad debt charge from the fixed to mobile price to derive the actual retail rate. The Office agrees that bad debt should be taken into account. However, in the Offices considered opinion, for competition analysis, consumers respond to price, not price minus bad debt.

Estimated Cost of Mobile Termination

2.28 The cost of mobile termination is a significant component of the overall maximum mobile retail MTM and FTM rates. The Office has estimated this charge by summing C&WJ's mobile termination costs plus an imputed charge for spectrum. The Office considered that the imputed spectrum charge shall be the capital cost of a US$50 million investment based on a 34.5% cost of capital, or US$17.25 million per year. The per-minute costs of this element shall be determined based on traffic levels exclusive of incoming international traffic expected for the year beginning in July 2002.

2.29 C&WJ submitted, on February 22, 2002 an estimate of its costs and prices for mobile termination. Its mobile termination costs were:-
J$6.222 per minute peak,
J$4.977 per minute off-peak, and
J$3.733 per minute weekend

2.30 It is necessary to add to this the cost associated with spectrum. As noted above, the annual cost of spectrum is US$17.25 million, or J$861 million (using an average exchange rate for the fiscal year 2002/2003 of US$1=J$49.93). The Office contends that this is the most appropriate exchange rate, especially given the period under review[7]. However, Digicel contends (on page 83 of its response) that "…taking into account that for 2004 the average exchange rate has been US$1 = J$60.5 the per minute cost for spectrum of J$0.86 when added to C&WJ cost would amount to maximum fixed to mobile rate of J$7.08." The Office notes that even if this reflected the true cost of termination, termination charges were still above cost in nominal and real terms, based on confidential pricing data submitted by Digicel,

2.31 On April 30, 2002, C&WJ submitted estimates of its mobile traffic, exclusive of incoming international traffic, for the years ending March 2001, 2002, and 2003. It estimated that, for the year ending March 2003, 1,219 million minutes would have been used.

2.32 Dividing the annual cost of spectrum by this traffic estimate leads to a cost per minute for spectrum of J$0.707. This amount should be added to C&WJ's mobile termination costs, leading to a maximum mobile termination rate for domestic FTM calls J$6.929 per minute (peak).

Market Definition and Dominance

2.33 Digicel indicates that "there is strong evidence to suggest that the OUR has blurred the concepts of market definition or dominance and the manner in which an assessment of both should be conducted."

[7] Digicel's fixed to mobile charge remained unchanged for over two years between April 2001 and August 2003. However, the most recent traffic data available to the Office is for the period April 2002 to March 2003.

2.34 The Office responds by noting the following:

1. The discussion on pages 18-19 of Digicel's response attempts to undermine the notion of separate call termination markets for each network and the OUR's view that there is limited demand side substitution. Digicel said that the OUR ignored "…other possibilities such as the prospect [of] a level of users own[ing] more than one phone, or that they can receive most of their calls at home or at work where it might be possible to receive calls on a fixed line instead." The Office is not convinced by this argument and the survey commissioned by the Office indicates that Digicel's position is counter factual. For example, the Office notes that only an estimated 11% of mobile subscribers subscribe to two or more networks. Moreover, the very need for multiple handset ownership could be cited as evidence of market distortion. In relation to FTF call being a substitute for MTM calls, only 38% of household respondents to the recent survey (December 2003-January 2004) indicated that they subscribe to both fixed and mobile service. Therefore, this substitution would not be possible for residents in 62% of households.
2. The discussion on page 28 relates to relative international termination charges. Digicel is correct to note that charges under pure caller pays systems are not directly comparable with caller charges where the receiver also pays (e.g. US). However, the Office recognizes this, and notes that, as discussed on pages 11-13 of consultative document No: TEL 2004/03; it is important to be cognizant of the economic characteristics of the calling party pays regime which obtains in Jamaica.
3. Digicel suggests that given the pending entry of AT&T Wireless into the mobile industry, "It is unreasonable for a regulator to attempt to define markets given such volatile market conditions." This seems to suggest that no definition of the market can be achieved. The Office is of the view that this has no merit and notes that, defining the market may pose some degree of complexity but it is not ruled out by new entry.
4. On page 39 Digicel argues that buyer power does not enter into the definition of the market. The Office notes that buyer power should be taken into consideration when the existence of dominance is considered. However, in the particular instance that was referenced, the Office only referred to buyer power in this section because of Digicel's suggestion that the relevant market was incorrectly defined and "…fails to take account of relative competitive power of market participants and the ongoing evolution of competition in the market. …"[8]
5. On page 40, in reference to a paragraph in consultative Document No: TEL 2004/03, Digicel stated that "It is simply incorrect to state that where a market is found there is implied dominance." The Office simply notes that,

[8] See page 16 of Digicel's response to "Dominant Public Voice Carriers No.2".

the statements in the aforementioned paragraph were obviously a summary of the Oftel's position.

6. On page 59 of Digicel's response, it quoted the Office as saying *"The smallest possible definition of the product market is wholesale mobile voice call termination for calls from a fixed or mobile telephone. Notably, this narrow definition of the market is attributed to the fact that, a call intended for a specific mobile subscriber cannot be sufficiently substituted by calls to other individuals."* Digicel then went on to suggest that the Office is arguing that there is a separate market for mobile termination for every customer. The reasoning is flawed as it is obvious that the Office's statement merely seeks to explain the basis for the seemingly narrow definition of the relevant market.

Factual Errors

2.35 According to Digicel, there are clear factual errors and misconceptions in the OUR's document.

2.36 In paragraph 3.10 (titled, "*Mobile Termination Rates for MTM Domestic Calls")* of the OUR's Supplementary Consultative Document (Document Number: TEL 2004/03), "Assessment of Dominance in Mobile Call Termination", the OUR stated that:

> "Off-net MTM voice call termination rates range from a low of $17.70 per minute (for calls to C&WJ and Digicel) and $19.70 per minute for calls to ODJ. ODJ's off-net MTM rate increased from $15.00 to $19.70 per minute on November 29, 2002. This increase was more than 11% in excess of the peak rate charged by other mobile carriers. ODJ has maintained this rate for a period in excess of one year. If only one voice call termination market existed, ODJ's off-net MTM termination rate would be constrained by the rate charged by other mobile carriers. Further, this rate took effect when ODJ's coverage was limited to three of fourteen parishes and its customer base less than 100,000. This suggests that market power is, to a significant extent, not dependent on coverage and subscriber base."

2.37 The first sentence inadvertently referred to off-net MTM termination rates but the actual rates stated were off-net retail MTM rates. However, although termination rates were not stated, based on information available in the public domain, this increase in MTM rate (other mobile to ODJ mobile) from a low of $15.00 per minute (for some callers) to a high of $19.70 per minute (for other callers) on November 29, 2002 was due to an increase in ODJ's termination rate. The overall increase attributable to a rise in termination rate was $2.00 per minute. This amounts to increases of 13.33% and 11.3% above the previous peak MTM retail rates of $15.00 and $17.70 per minute.

2.38 In paragraph 3.11 (titled, "*Mobile Termination Rates for International Calls")* of the OUR's Supplementary Consultative Document (Document Number: TEL 2004/03), "Assessment of Dominance in Mobile Call Termination", the Office stated that:

> "In the recent (December 15, 2003) oral judgment of the Supreme Court of Jamaica in the suit M-074/2003-Office of Utilities Regulation vs. Minister of Commerce Science and Technology, certain carriers have responded by serving notice of their intention to increase call termination on their networks. In fact, even before this judgment, Digicel indicated on November 5, 2003 that it intended to increase its international mobile termination charge to US$0.1661 compared to the OUR's estimated cost of US$0.1108. This is approximately 50% above the estimated cost. The action created an immediate danger to the telecommunications market in that there was a real possibility of a collapse of competition in the market for incoming international calls. This action and its likely consequence of eliminating competition and potential competition are clear indicators of market power and dominance."

2.39 The Office wishes to state that the termination rate in paragraph 3.11 of its consultative document (TEL 2004/03) is incorrect. Digicel's notification actually indicated that it was increasing its rate to J$8.30 or US$0.138 US cents approximately 25% above the OUR's estimated cost of US$0.1108. This correction does not change the fact that a unilateral increase in price, the ability to sustain this price increase and the likely consequence of eliminating competition and potential competition are clear indicators of market power and dominance.

2.40 The Office notes that while these errors were correctly identified as errors of fact, they could not be considered to be material; hence, they would not affect the conclusions on market definition or dominance. Further, the correct facts were incorporated in this Determination Notice.

Criteria for Standard Competition Analysis

2.41 According to Digicel, "…There is no reference or attempt to address numerous important criteria normally considered vital in any standard competition analysis."

2.42 The Fair Competition Act states that:

> "… an enterprise holds a dominant position in a market if by itself, or together with an interconnected company, it occupies such a position of economic strength as will enable it to operate in the market without effective constraints from its competitors or potential competitors."

2.43 This means that, in conducting its assessment, the Office is required to:

(a) define the relevant market

(b) Conduct an assessment of dominance by determining if an entity in a defined relevant market occupies a position of economic strength that enables it to operate in the relevant market without effective constraints from its (i) competitors or (ii) potential competitors.

2.44 As is obvious from the analysis in the chapters that follow, the Office's assessment of dominance follows the letter of the law.

2.45 Further, according to the FTC "…The standard test of whether a firm is dominant is whether it has the power to behave to an appreciable extent independently of consumers, its competitors and customers, in terms of pricing and other decisions. In assessing the existence of a dominant position, the FTC will consider both market share and entry conditions …."[9] Also, in assessing market power, the FTC notes that market power is more likely to exist if an enterprise has a persistently high market share. However, it is important that market share analysis is supported by an assessment of entry barriers since, "…the lower the entry barriers the more likely it is that potential competition will prevent enterprises within the market from exercising market power."[10] The Office wishes to note that the OUR's analysis is consistent with the standard test applied by the FTC.

Consultation with the FTC

2.46 Digicel alleges that "…the OUR has not engaged in adequate consultation with the FTC on issues of market definition and dominance."

2.47 The Office does not consider that Digicel's has the authority to determine what constitutes adequate consultation with the FTC. In any event, the Office's consultation with the FTC goes beyond that of other parties.

[9] See http://www.jftc.com/news&publications/Publications/PDF%20DOCUMENTS/FCA%20-Guide%20to%20Anti-competitive%20Practices.pdf .

[10] FTC ibid.

2.48 The OUR has consulted the FTC on more than one occasion during this consultative process. In at least two cases, the FTC has supplied written comments. The FTC also had an opportunity to comment on this Determination Notice in its draft form. Written comments on the Public Consultative Document were received from the FTC and interested parties and were published on the OUR's website.

2.49 In relation to the time allotted for responses, interested parties can request an extension to the deadlines set by the Office. In fact, interested parties, namely Digicel and C&WJ have requested and received extensions on more than one occasion during this process. It is also important to note that the Office also consults the FTC when making changes to the timetable. Where there are objections to aspects of the timetable, the Office has made adjustments based on recommendations made by the FTC. Notwithstanding this, the FTC can still request additional time before giving oral and/or written comments.

The Risk of Regulatory Intervention and Expected Return on Investment

2.50 The Office is aware that excessive regulation can reduce the incentive to invest and to innovate. Therefore, the Office is careful to ensure that it balances its responsibility to both consumers and operators, since a failure to do so could have detrimental welfare effects.

2.51 According to Digicel's interpretation of statements made by the Peruvian Regulator, in January 2004 [the Organismo Supervisor de Inversión Privada en Telecomunicaciones ("OSIPTEL") issued a working paper on the regulation of local fixed to mobile calls entitled *Regulación de las Llamadas Locales Fijo-Móvil* which can be obtained from OSIPTEL's web site] OSIPTEL expressed the view that regulating local fixed to mobile termination rates:

- would mean a change to the non-regulatory interventionist principles for this service which could have a negative impact on the stable regulatory regime and the expectations on return of investment;
- could affect the future income of mobile telecommunications companies and their expected return on investment that could signify a decrease in the present and future investment of mobile telecommunications companies;
- could impact on the growth of the mobile telecommunications market in Peru due to the fact that any decrease in the income of mobile telecommunications companies could result in a decrease in investment in the sector that is being undertaken by mobile telecommunications

companies in Peru as a result of the increasing penetration rates of mobile telecommunications services; and

- could impact the quality of service in the mobile telecommunication sector as a result of the fact that any decrease in the income of mobile telecommunications companies could result in a decrease in investment.

2.52 Digicel translates the conclusion of this statement as follows: As a result of these risks OSIPTEL concluded that it was preferable that mobile telecommunications companies voluntarily undertake to lower the fixed to mobile rates over a period of eighteen (18) months to the average benchmark rate for Latin American countries of USD$0.294 (Digicel has converted the per second rate to a per minute rate for the OUR's convenience).

2.53 The Office's view is that if the FTM call termination markets in Peru were competitive, carriers would not have to voluntarily reduce call termination rates, since such rates would be set by the market. Hence, if rates are reduced voluntarily, this does not mean that carriers are non-dominant. In fact, it could be argued that what OSIPTEL was doing was to use a credible threat of regulating interconnection to correct a market distortion. What is important in assessing dominance is whether a carrier is effectively constrained by competitors or potential competitors.

Cellophane Fallacy and Critical Loss

'Cellophane Trap'

2.54 "The essential point of identifying the relevant market in cases of alleged dominance is to assess whether a firm or group of firms have market power, generally thought of as the power to raise price. By considering the degree of product substitution at prevailing prices, one is effectively considering the position after the firm or firms have already raised price to the maximum extent possible, i.e. after they have exercised that market power. In effect the US Supreme Court was seen to have made this mistake in the *Cellophane* case in what has come to be known as the 'cellophane trap'.

2.55 Thus, in order to define the market in abuse of dominance cases, the SSNIP test would have to be estimated on the basis of competitive prices rather than at the prevailing price level. Of course it may not be possible to calculate the competitive price level." [11]

[11] **http://www.compecon.ie/Mktdefn.htm**.

2.56 On page 84 of Digicel's response, it states that, "…given the strong anecdotal evidence as reflected in declining prices in real and nominal terms for mobile termination in Jamaica and further supported by the fact that Jamaica has one of the lowest mobile termination rates and retail rates in the world, the Office can be satisfied that the correct approach to conducting the HMT test is by using the prevailing price of each operator."

2.57 As stated before, falling prices could occur even under monopoly pricing and profit maximizing conditions if costs of production are shifting down due to technological change. Therefore, the Office does not consider that falling (real) price is conclusive evidence of the existence of competition in the market. Further, the Office would fall into the 'cellophane trap' if it proceeded to use these prices to conduct the SSNIP.

Critical Loss

2.58 "An alternative method for applying the SSNIP test where demand elasticities cannot be estimated, involves estimating the critical loss (y). The critical loss is defined as the maximum sales loss that could be sustained as a result of the price increase without making the price increase unprofitable. Where the likely loss of sales to the hypothetical monopolist (cartel) is less than the Critical Loss, then a 5% price increase would be profitable and the market is defined."[12]

2.59 Page 85 of Digicel's response states that "…the OUR made an assumption that the true competitive price of mobile termination on Digicel' network was $5.268, based on an 'estimate' of the cost of termination on C&WJ's network. If the true cost of providing mobile termination on Digicel's network were in fact equal to this figure of $5.268, then it is possible to calculate the price-cost margin for the service at 95% (M = (10.268-5.268)/5.268). Following on from this, then using standard critical loss analysis as per merger cases, the critical loss level for a 5% increase in the price of a product can be calculated as follows:

L = X/X+M,
Where L, is the critical loss level L = 5%/5%+95% = 5%
M is the price cost margin
And X is the price increase

2.60 This tells us that if the OUR's assumptions about the true level of Digicel's costs are correct then it would only be profitable to increase the cost of mobile termination by 5% if sales were to fall by less than 5%."

[12] Compecon Limited ibid.

2.61 The Office wishes to note that the formula used by Digicel to calculate the price cost margin is incorrect. The appropriate formula is[13]:

$M = (P – C)/P$, Where P is the price and C is the cost
$M = (10.268 - 5.268)/ 10.268$
$= 0.487$ or 48.7%

This implies that the critical loss would be:

$L = 5\%/(5\%+ 48.7\%)$
$= 9.3\%$

2.62 Therefore, the maximum sales loss that could be sustained as a result of the price increase without making the price increase unprofitable is 9.3% and not 5% as calculated by Digicel. Thus, for a 5% increase in price, Digicel would have to lose greater than 9.3% of its sales to make that increase unprofitable. This suggests that Digicel has more power in relation to increasing its price than it reported.

2.63 The Office notes that a high gross margin implies a small critical loss but it also indicates a small actual loss.[14] This is so because a high gross margin relative to cost is indicative of market power which is graphically or mathematically reflected in the elasticity of the demand curve.
Based on the relationship between marginal revenue (MR) and price elasticity of demand ($\varepsilon_{Q, P}$):

$$(1)\ MR = P\,(1 + 1/\varepsilon_{Q, P})$$

The Inverse Elasticity Pricing Rule can be obtained by imposing the profit maximization condition:

$$(2)\ M = (P^{*} - MC^{*})/P^{*} = -1/\varepsilon_{Q, P}$$

2.64 By this fundamental economic principle, there is a strong presumption that a high gross margin (as calculated above) implies that the product in question has an inelastic demand. Thus, the purchasers of this service are **not** generally considered to be price sensitive. This would imply that producers of this service possess market power.

---

[13] See M.L. Katz and C. Shapiro, “Critical Loss: Let’s Tell the Whole Story”, Antitrust Magazine, Spring 2003.

[14] See Katz and Shapiro ibid.

CHAPTER 3: MARKET DEFINITION

Calling Party Pays (CPP)[15] and the Economic Characteristics of Mobile Call Termination

3.1 The calling party pays (CPP) regime is a billing method in which a mobile telephone subscriber pays only for making calls and not for receiving them. That is, the calling party pays the total price for a retail call. Thus, the voice call termination charge is included in the originating network provider's (either fixed or mobile) cost base and is a component of the retail price that the calling party's operator charges for calls originating on its network.

3.2 The effect of the CPP regime in the domestic mobile voice call retail market (i.e. the market for calls to mobiles) is that, mobile network operators have no incentive to lower the price of calls to their mobile networks from other networks (fixed or mobile). The fact is that calls to mobile subscribers must terminate on the particular network that the called party subscribes to.

3.3 The effect of the CPP regime is similar for the wholesale market for mobile call termination. In relation to fixed-to-mobile and off-net mobile-to-mobile calls, apart from the originating operator's commercial interest in terminating these calls, each operator is obligated under the Act to facilitate any-to-any connectivity[16]. For these calls, the mobile public voice carrier has no incentive to keep termination charges low. Further, lowering these charges would give the competitors an advantage in the retail market since this would lower their costs. This suggests that the effect of CPP regime enables mobile public voice carriers to price voice call termination services above cost without being constrained by competition or potential competition.

3.4 Since the calling party pays for the call, but does not choose the network on which its call is terminated, the calling party has no alternative to the purchase of call termination service (indirectly through the retail rate) from the network on which the called party subscribes. It is also important to note that since voice call termination provides real time telecommunication, termination to a particular customer is a bottle-neck in contacting a specific customer, even in cases where a network operator has a small share of the retail markets. Under these circumstances, it

[15] See Review of Mobile Wholesale Voice Call Termination Markets, EU Market Review, 15 May 2003 at http://www.ofcom.org.uk/static/archive/oftel/publications/eu_directives/2003/ctm/ctm0503.pdf.

[16] This enables customers of another public voice network to complete calls to customers of another public voice network or to obtain service from other networks.

may be desirable that termination charges for all mobile operators be regulated in accordance with Section 29(4-6) of the Act.

Relevant Market(s)

3.5 Based on the suggestion that features like call-back, e-mail and text messaging are substitutes for mobile call termination; the suggested constraint of buyer power on the price setting behaviour of mobile operators, and the claim that there is one call termination market, the Office commissioned an independent customer survey to determine the validity of these claims. The summary results of this survey (December 2003–January 2004), available on the OUR's website, do not support this claim.

Mobile Call Termination

Product Market

3.6 Call termination is the service of delivering calls to the intended destinations on a voice network (fixed or mobile). The smallest possible definition of the relevant product markets is the markets for wholesale mobile voice call termination on the network of each mobile operator. This means that mobile call termination to each mobile operator's network constitutes a separate market. Notably, this narrow definition of the market is attributed to the fact that, a call intended for a specific mobile subscriber cannot be sufficiently substituted (in the retail market) by calls to other individuals. From a wholesale perspective, it is not possible for the originating network operator to select the network on which the call will terminate.

3.7 The pricing of mobile call termination is usually of concern in cases where calls to mobile subscribers originating on other networks (fixed or mobile), are terminated to the called party on the mobile network to which the called party subscribes (fixed to mobile calls and off-network mobile calls). The originating operator pays a per-minute or per second charge for terminating calls on other networks. However, the actual price to the calling party includes the termination charge and the retention charge of the originating operator, that is, the retail price for an off-net call (calls across networks, fixed to mobile or mobile to mobile).

3.8 Since the caller pays the price for calling a mobile phone (based on the principle of calling party pays - CPP), this suggest that the mobile operator has no incentive to lower terminating charges, (assuming that there is an absence of competition or regulation), even when faced with declining operating costs and increasing call volumes. The Office wishes to state unequivocally, that the identification of this anomaly in market conditions does not imply that the Office intends to suggest reverting to a receiving party pays system[17].

Supply-Side Substitution

3.9 Supply-side substitution is said to occur in situations where, in response to an increase in the price of the product or service in question, suppliers of other products or services switch (in the short-run) to supplying substitutes for the product whose price has risen without incurring significant supplementary costs. This would make the price increase unprofitable as customers switch to the lower priced service. Thus, if a mobile operator increases its termination charges appreciably above what would obtain if a given market for mobile voice call termination was competitive, suppliers offering a lower priced supply side substitute would render the high price service unprofitable since customers of the high priced mobile operator are likely to purchase the lower priced suppliers' services instead.

3.10 Since mobile and fixed call termination services are not regarded as substitutes, likely alternative to termination service offered by a mobile carrier is that offered by another mobile carrier. However, it is not possible for the mobile network originating a call to select the network on which the call will terminate. Given the current and foreseeable state of technological development, any technical solution requires the originating operator to control the mobile network that its subscribers are connected to at any given time, with the ability to communicate with that network's customers' SIM cards to be able to switch networks. The Office is not aware of any technology that will allow this kind of signalling to take place. Additionally, this solution would require each mobile operator to share Subscriber Identity Module (SIM) information[18]. Mobile phones are usually locked to prevent subscribers from switching to a competing mobile service provider. Assuming that mobile operators act in a profit-maximizing manner, a terminating operator is likely to refuse to supply its subscribers' SIM information, thus eliminating supply side substitution.

3.11 It has been posited by one respondent to the consultation that text messages and e-mail are possible substitutes. Both can be classified as messaging services and do not reflect real-time communication. It is important to note that text messaging and e-mail are not currently offered across mobile networks or between mobile and fixed networks. Therefore,

---

[17] Although the RPP is a technically feasible solution to the distortion caused by mobile operators' incentives to maintain high termination charges, it appears to be economically more efficient to have the calling party (the person that initiates the call) bear the cost of their consumption decision. Further, the experience in the Jamaican market as well as other markets (example, the US), suggests that penetration rates have remain relatively low under RPP systems.

[18] The SIM information is usually stored on a SIM card, a chip in mobile telephones that only works on a particular network.

supply side-substitution by these services from a fixed or mobile operator is not likely.

Demand Substitution

3.12 Demand side substitutability means the extent to which customers can substitute other services or products for the service or product in question. Switching Network: Service providers sometimes suggest that if mobile operators charge unreasonable termination rates customers of other operators would not be encouraged to switch to the high termination rate operator.[19] Additionally, network operators sometimes argue that high churn rates coupled with rapid network expansion demonstrate that sufficient consumers are able to respond to high call termination rates. However, these arguments do not apply, since the fixed to mobile (FTM) retail rate is not charged to the called party on the mobile network. It is the fixed line subscriber who pays. The same is true for off-net mobile to mobile (MTM) calls.

3.13 As noted before, there is a link between the CPP and the definition of the market. Since the calling party pays the total price of a call to a mobile phone (and indirectly for the charge for termination service), there is a disconnection between the calling party, and the person who makes the choice of the terminating network and who therefore, influences the level of the termination charge. Therefore, it is not likely that the FTM termination rates will factor into the consumers' decision to subscribe to a particular mobile network.

3.14 In the response to question 29[20] of the recent survey, 65% of respondents thought that the cost charged to others for calling a customer was very important. This response is not at odds with the OUR's findings that there is a market for mobile call termination. When deciding on the purchase of a mobile phone (that is locked into a particular network) only 9.1% of the householders surveyed indicated that they consider the cost of others calling them. The Office considers that this response is more reflective of consumers' behaviour since it reflects the decision to purchase a phone. In fact, when asked what are the most important things that are taken into consideration when deciding on a service provider (question 15) only 1.9% said they consider the cost of others calling them. Respondents identified the cost of making calls (30.8%), the coverage of the service (28.1%) and the clarity of the service (13.3%) as the most important things considered when deciding on a service provider.

---

[19] See Digicel's response to the OUR's first consultative document, "Dominant Public Voice Carriers."

[20] The question reads, how important to you is the cost of others calling your mobile phone? See December 2003-January 2004 survey.

3.15 Alternative Methods of Communication: Mobile network operators often argue that short messaging service (SMS), E-mail, facsimile, voice mail and other similar methods of communicating are used to avoid high mobile termination charges. In relation to these messaging services, their prices have consistently remained below termination charges and consequently, below FTM and MTM retail charges. FTM termination charges remained as high as $10.268 per minute (between April 2001 and August 2003). If these services were effective substitutes, the lower prices would constrain FTM and MTM charges by the effect of significant numbers of subscribers switching from mobile calls to these alternatives. The Office has seen no evidence of this level of substitution. Further, these alternatives to a voice call are not close substitutes since they do not occur in real time communication. It is also important to note that SMS and e-mail are not currently offered across mobile networks or between mobile and fixed networks.

3.16 Based on the December 2003-January 2004 survey, although 92% of the respondents indicated that they are aware of the text messaging feature, 47% indicated that they do not use this feature on a weekly basis. Additionally, 13% indicated that they use it weekly and only 27% indicated that they use this service daily. Even if this service was offered across networks, the Office does not consider that this would translate into a volume of use that would be sufficient to constrain the wholesale price of mobile termination and the retail price of calls to mobile subscribers. Additionally, text messaging is limited by the number of characters that can be sent in a given message.

3.17 Substitution between Voice Calls: Since some telephone subscribers have both mobile and fixed lines (38% of household respondents) it is possible for some callers to make FTF calls instead of FTM or MTM calls. This suggests that the suppliers of fixed call termination service could offer this as a substitute for mobile call termination. However, since 55% of the respondents in the household survey have only a mobile phone, callers have no choice but to use this service. Additionally, as much as 43% of the calls to household respondents are received on the road. Hence, the Office does not consider fixed termination to be a close substitute for mobile termination.

3.18 If the substitution between voice calls (for example, a fixed to fixed (FTF) call for a FTM call) was strong then the FTM termination charge would be constrained by the retail price of FTF calls. Further, if these calls were substitutes for each other, it would suggest that fixed telephony is a substitute for mobile telephony. However, this is not so, partly due to the convenience of making or receiving a mobile call at any given location in the coverage area while in transit and the fact that only 11% and 8.2% of the household and corporate respondents respectively, indicated that they would replace their fixed line with a mobile line.

3.19 Call Back: A caller to a mobile subscriber (example, a FTM call) sometimes requests that the called party calls them back, hence reversing most of the call charges and avoiding most of the FTM retail charges. In the current context, the person initiating the call places a call to the called party just to request that they call back. The caller only pays for the short time spent requesting the called party to return the call. To some extent, the per minute billing regime discourages this behaviour. However, if sufficient subscribers engage in this action, it is argued that FTM call termination rates would be constrained. But, the OUR has no evidence that this is so. However, if this was the case, Digicel could not have maintained its FTM retail rate at 71% above the lowest FTM retail rate (in real and nominal terms) for over two years[21]. This differential was due to the difference in termination charge since the fixed retention rate remained unchanged.

Geographic Market

3.20 The mobile licence requires each public mobile voice carrier to provide 90% geography coverage within 5 years of its licence being issued. Further, two of the three mobile carriers offer coverage in most areas within Jamaica. Based on the fact that all mobile public voice carriers have licences that authorize them to provide service throughout Jamaica and the fact that two of three operators' network extend to most areas across Jamaica, the Office considers that the geographic market for termination services for these two operators is Jamaica. In the case of the third operator, ODJ, the geographic market would be limited to the areas where service is now available.

Market Definition Conclusion

3.21 The foregoing analysis suggests that the relevant product markets in this analysis are the markets for wholesale mobile call termination service in Jamaica. The analysis points to the fact that there are no effective demand and supply side substitutes for call termination on any given mobile network.

[21] Between April 2001 and August 2003, Digicel's FTM rate was $12 per minute while the rate for calling C&WJ was as high as $7 per minute.

Determination 3.0
Mobile voice call termination to each mobile operator's network constitutes a separate market. That is, the current relevant markets are:

- **wholesale market for voice call termination on Mossel's (Digicel's) mobile telephone network**
- **wholesale market for voice call termination on Cable and Wireless' (C&WJ's) mobile telephone network**
- **wholesale market for voice call termination on Oceanic Digital's (ODJ's – formerly Centennial) mobile telephone network**

CHAPTER 4: MARKET POWER AND DOMINANCE IN MOBILE VOICE CALL TERMINATION MARKETS

Introduction

4.1 Dominance in telecommunications markets is defined in accordance with Section 19 of the Fair Competition Act (FCA). This section states that, "… an enterprise holds a dominant position in a market if by itself, or together with an interconnected company, it occupies such a position of economic strength as will enable it to operate in the market without effective constraints from its competitors or potential competitors." That is, the analysis of dominance must take place in a defined relevant market and should demonstrate that an entity has sufficient market power that enables it to act (by itself or in concert with other entities) without being effectively constrained by its competitors or potential competitors.

Relevant Markets

4.2 Based on the analysis in the previous chapter, the relevant markets in this determination are the:

- wholesale market for voice call termination on Mossel's (Digicel's) mobile telephone network
- wholesale market for voice call termination on Cable and Wireless' (C&WJ's) mobile telephone network
- wholesale market for voice call termination on Oceanic Digital's (ODJ's – formerly Centennial) mobile telephone network

Market Share

4.3 Since there is no effective substitute for call termination on a given network, all mobile operators have 100% of their respective call termination markets. According to an FTC publication, it … "will generally consider an enterprise to be dominant if it has a 50 percent market share."[22] Based on the EU's Article 82 (the equivalent of the Fair Competition Act's Section 20) dominance is presumed if a company has a market share that is consistently over 50%. However, since market share does not provide conclusive evidence on dominance in a relevant market, an assessment of entry barriers and other competitive constraints is necessary.

[22] See the FTC's publication: A Guide to Anti-Competitive Practices.

Entry Barriers

4.4 Given that mobile voice call termination to each mobile operator's network constitutes a separate market, there are no existing competitors. However, the threat of market entry is one of the main competitive constraint on existing entities in a relevant market, if such entry is highly probable, timely and of **competitive significance**. The relevant wholesale markets for mobile voice call termination in Jamaica are characterised by non-transitory technological entry barriers. From a wholesale level, there are no technologies that allow an originating operator to choose the network on which a call is terminated. Further, since each operator is obligated under the Act to provide its subscribers with any-to-any connectivity and end-to-end operability, originating operators must purchase mobile voice call termination services from mobile operators. This technological entry barrier is further reinforced by the CPP arrangement.

4.5 Even if the technology existed for callers to mobile subscribers or originating operators to select a terminating mobile operator based on price, the practice of SIM card locking would limit, if not nullify any effort at an alternative.

4.6 Therefore, mobile voice call termination is viewed as having technical barriers to entry. Using existing technologies, a call to a mobile subscriber can only be terminated on the network that the called subscriber is on. The originating operator cannot use the voice call termination service of one operator as an alternative to the mobile voice call termination service of a mobile operator. These kinds of technological exclusion create barriers to entry which usually justify *ex ante* regulation.[23]

4.7 In relation to the termination of calls, the Office is not aware of the existence of a technology that allows a caller from a fixed line (for example) to select the network on which he/she wishes to terminate a call to a mobile phone, even if the call is to a mobile phone with multiple SIM cards. The Office is convinced that based on the existing and its knowledge of pending technological developments, an originating operator does not have any viable alternatives to allow for any operator other than the terminating mobile network operator to terminate voice calls (to subscribers) on its network.

[23] See Squire, Saunders and Dempsey, May 2002, Market Definition for Regulatory Obligations in Communications Markets (A Study for the European Commission).

Other Competitive Constraint
Numbering

4.8 Numbering rules that do not allow number branding facilitates the efficient allocation of numbering resources but may also contribute to consumer ignorance. Market power is enhanced if consumers are unable to identify which network they are calling. The extent to which such ignorance exists increases the mobile network operator's ability to raise termination rates without being affected by an adverse reaction from consumers.

4.9 Although number ranges associated with the various mobile network operators are in the public domain—in the printed telephone directory—the Office notes that these number ranges are not likely to be memorized by subscribers as in several instances; more than one carrier is located in ranges such as 300, 400 and 800. Further, the information in the printed telephone directory is not necessarily up to date since it is updated once per year. Since the industry subscriber base is growing rapidly, there are usually new codes that are allocated and opened within a given year. Therefore, since consumers are unable to identify which network they are calling, their demand for retail FTM and MTM call services and indirectly, mobile voice call termination services, is likely to be more inelastic. Further, the CPP arrangement creates a disconnection between the calling party, and the person who makes the choice of the terminating network and who therefore, influences the level of the termination charge means that the calling party is further limited in constraining mobile voice call termination charge.

Excessive Prices and Profitability

(a) Mobile Termination Rates for FTM Domestic Calls

4.10 Mobile call termination cost is the most significant component of the FTM termination rates (greater than 70%). The three components of the FTM charges are termination, spectrum cost and the fixed network retention cost. Since the only information that is available to the Office on the cost of mobile call termination is that supplied by C&WJ, the Office, after careful scrutiny, decided to use this as a proxy for the industry. However, since the economic cost of spectrum was not included in C&WJ's costing but is a part of the other operators' costs an imputed price for spectrum will be added.

4.11 C&WJ's charge for FTM calls is $7 per minute. Because C&WJ's fixed network business unit's retention for a FTM call remains at J$1.732 per minute, its mobile termination rate is $5.268 per minute. On the other hand, Digicel's peak fixed to mobile retail rate up to August 2003 was J$12 per minute. This means that Digicel's termination charge was

J$10.268 when C&WJ's fixed retention charge is deducted. This implies that Digicel earned **$4.17** per minute above C&WJ's mobile cost of terminating traffic from C&WJ's fixed network. When compared with the OUR's estimated maximum mobile termination charge of $6.929 per minute, this suggests that Digicel earned excess profits of **$2.52** per minute above the cost of terminating traffic from C&WJ's fixed network.

4.12 ODJ's FTM rate started out at $7 per minute when that service was launched in the last quarter of 2001. This was increased to $9 per minute in October 2002 but was subsequently reduced to $6.95 per minute. ODJ charges the lowest rate for FTM calls and implicitly, the lowest FTM termination rate. But as shown below, ODJ has the highest off-net MTM rate for calls and implicitly, the highest off-net mobile termination rate.

(b) Off-Net MTM Call Rates for Domestic Calls

4.13 Off-net MTM voice call[24] termination rates range from a low of $17.70 per minute (for calls to C&WJ and Digicel) and $19.70 per minute for call to ODJ. ODJ's off-net MTM rate increased from $17.70 to $19.70 per minute (for some callers) in November, 2002. The overall increase attributable to a rise in termination rate was $2.00 per minute. This increase was more than 11% in excess of the peak rate charged by other mobile carriers. ODJ has maintained this rate for a period in excess of 18 months. This demonstrates that ODJ's voice call termination rate for off-net MTM termination rate is not constrained by the rate charged by other mobile carriers. Further, this rate took effect when ODJ's coverage was limited to three of fourteen parishes and its customer base less than 100,000. This suggests that market power is, to a significant extent, not dependent on coverage and subscriber base or shares of the retail markets.

(c) Mobile Termination Rates for International Calls

4.14 Following the December 15, 2003 oral judgment of the Supreme Court of Jamaica in the suit M-074/2003-Office of Utilities Regulation vs. Minister of Commerce Science and Technology, certain carriers responded by serving notice of their intention to increase call termination on their networks. In fact, even before this judgment, Digicel indicated on November 5, 2003 that it was increasing its rate to J$8.30 or US$0.138 US cents approximately 25% above the OUR's estimated cost of US$0.1108. This pricing behaviour is indicative of market power.

[24] A call made from one mobile network to another.

Countervailing Buyer Power

Wholesale

4.15 Theoretically, other operators could use their buyer power to force mobile operators with high termination charges to lower those charges. However, any refusal to pass on calls to networks with higher termination charges would be in violation of the any-to-any principle of connectivity based on Section 29(2) (a) of the Act.

Retail

4.16 It is hypothesized that corporate user groups could use their buying power to pressure their mobile supplier to reduce its call termination charges. This implies that the buyer power of corporate customers could constrain the pricing of a given mobile operator's termination service as in the case where competition is present. That is, the volume of such purchases is used to constrain the mobile operator from setting the price for its mobile termination services above the "competitive price".

4.17 According to the corporate survey data, 78.2% of the respondents indicated that they are not members of a user group. The Office notes that even in cases where user groups traffic is significant, operators can simply offer these subscribers special retail tariffs to ensure that these calls remain on-net and maintain above cost pricing for the 78.2% of respondents that are not members of user groups. This separation allows the mobile operator to minimize any pricing pressure that might come from the more price sensitive users (corporate subscribers).

4.18 The ability of residential subscribers (the larger of the two groups of respondents) to exert countervailing buyer power in light of the prevailing CPP regime is limited. This is due to the fact that there is a disconnect between the calling party who pays for the call and indirectly, for the mobile voice termination service, and the called party who selects the terminating operator. Thus, although it is the caller who pays, they have no influence on the level of the termination charge.

Market Power and Dominance

4.19 Increased competition between mobile service providers is expected to reduce the on-net MTM retail rates. But, competition for subscribers is not likely to reduce the off-net and FTM call termination rates. The fact is termination on one mobile network cannot be substituted for termination on another network. That is, at the wholesale level, there are no technologies that allow an originating operator to choose the network on which a call is terminated. At the retail level, a caller from the PSTN or from mobile network ***A*** who desires to contact a subscriber on mobile network ***B*** cannot use the termination service offered on mobile network ***C*** since the subscriber is not located on that network. Mainly due to the technological barriers to entry, all mobile carriers are dominant with respect to the voice call termination service offered.

Conclusion

4.20 Based on the foregoing analysis, the absence of supply-side and demand-side substitute means that the relevant markets are the wholesale markets for terminating voice calls on a given mobile operator's network. That is, there is a separate market for terminating calls on each mobile network.

4.21 There is no supporting evidence that indicates the existence of a national market for mobile call termination. Further, each mobile carrier is dominant in relation to the voice call termination service it offers. If this remains unchecked, a profit maximizing monopolist (in this case, the mobile operator) is expected to maintain high prices or increase its price in excess of cost, over time.

4.22 Under the CPP regime, the effect in the mobile voice call wholesale and retail markets is that, mobile network operators have no incentive to lower the price of calls to their mobile networks from other networks (fixed or mobile). The fact is callers to mobile subscribers must terminate those calls on the particular network that the called party subscribes to. Further, since there is no close substitute to this real time service, the Office has determined that the technical characteristics of call termination services, the common use of SIM card locking and the principle of the CPP regime, result in the absence of competition and potential competition. This means that each mobile operator's pricing of termination services is unconstrained by competition or potential competition. To avoid the anticompetitive effects of above cost termination rates, where they are found to exist, it is desirable that voice call termination charges for all mobile operators are regulated to reflect cost based pricing consistent with the requirements of the Act.

Determination 4.0
All mobile carriers are dominant with respect to the call termination service offered.

4.23 In accordance with the requirements of the FCA, the Office demonstrated above that in the ***defined relevant market*** each mobile operator ***occupies such a position of economic strength***, that is, has sufficient market power that enables it to ***operate without effective constraints*** or to act by itself in setting the price mobile voice call termination service on its networks without being effectively constrained by its ***competitors or potential competitors***.

CHAPTER 5: INTERIM REGULATORY REMEDIES AND FUTURE CONSULTATIONS

5.1 Based on the position of dominance of all carriers offering mobile voice call termination services, that is, the ability to behave independent of competitors and potential competitors, the Office imposes the following conditions. All mobile carriers shall:

1) supply the Office with current and any new or amended interconnection agreements
2) provide interconnecting parties with advanced notification of price changes and copy any such notification to the Office
3) Supply the Office with wholesale rates for mobile voice call termination services
4) Supply the Office with call volume by type (number of calls, call minutes)
5) Supply the Office with call revenue by type

All mobile carriers are required to comply with these requirements.

Future Consultations

5.2 The Office will undertake the following consultations:

1) An assessment of the Cost of Mobile Call Termination services
2) The obligations to be imposed on a Dominant Mobile Operator: these include, but not limited to:-
    (a) Requirements for Regulatory Accounts;
    (b)Provision of a Reference Interconnection Offer; and
    (c) Competitive Safeguards

Determination 5.0
The Office has determined that all mobile carriers shall:

- **supply the Office with current and any new or amended interconnection agreements;**
- **provide interconnecting parties with advanced notification of price changes and copy any such notification to the Office;**
- **Supply the Office with wholesale rates for mobile voice call termination services;**
- **Supply the Office with call volume by type (number of calls, call minutes) and;**
- **Supply the Office with call revenue by type.**