Malaysian Communications and Multimedia Commission

Assessment of Dominance in Communications Markets

Public Inquiry Paper

11 July 2014

Malaysian Communications and Multimedia Commission
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PREFACE

The Malaysian Communications and Multimedia Commission (**MCMC**) invites submissions from industry participants, other interested parties and members of the public on the questions and issues raised in this Public Inquiry Paper on **Assessment of Dominance in Communications Market**. Submissions are welcome on the specific matters on which comment is sought on the MCMC's preliminary views. Submissions are also welcome on the rationale and analysis in this Public Inquiry Paper (where no specific questions have been raised) and the following documents:

(a) Market Definition Analysis;

(b) Guideline on Substantial Lessening of Competition (SLC Guideline); and

(c) Guideline on Dominant Position (Dominance Guideline).

Such submissions should be substantiated with reasons and, where appropriate, evidence or source references. Written submissions, in both hard copy and electronic form, should be provided to the MCMC in full by **12 noon, 25 August 2014.**

Submissions should be addressed to:

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Malaysian Communications and Multimedia Commission
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In the interest of fostering an informed and robust consultative process, the MCMC proposes to make submissions received available to interested parties upon request. The MCMC also reserves the right to publish extracts or entire submissions received. Any commercially sensitive information should be provided under a separate cover clearly marked '**CONFIDENTIAL**'. However, for any party who wishes to make a confidential submission, a "public" version of the submission should also be provided.

The MCMC also proposes to conduct a Public Inquiry Clarification Session at which stakeholders may make oral submissions to the MCMC and seek clarification on the issues raised in this paper. The session will be held at the MCMC Auditorium, Cyberjaya on **7 August 2014** at **9:30 am.**

Members of the public who wish to attend the session should register with the MCMC on the above contact details by **12 noon on 25 July 2014**. Parties who wish to address questions to the MCMC during the public hearings should also notify the MCMC of those questions in advance to the above contact details by **12 noon on 25 July 2014.**

The MCMC would like to express gratitude to interested parties for their participation in this consultative process and look forward to receiving written submissions.

Contents

ABBREVIATIONS AND GLOSSARY

ACCC	Australian Competition and Consumer Commission
ADSL	Asymmetric Digital Subscriber Line
ASEAN	The Association of Southeast Asian Nations
ATM	Asynchronous Transfer Mode
BEREC	Body of European Regulators for Electronic Communications
BT	British Telecom
c-i-c	Commercial in Confidence
CIIP	Common Integrated Infrastructure Provider
CMA	Communications and Multimedia Act 1998
CTT	Common Tower Technologies Sdn Bhd
DEL	Direct Exchanged Line
DRM	Digital Rights Management
DSL	Digital Subscriber Line
DSLAM	Digital Subscriber Line Access Multiplexer
DTH	Direct-To-Home
DTTB	Digital Terrestrial Television Broadcast
EC	European Commission
EIC	External Interconnection Cable
EPL	English Premiere League
ESA	Exchange Service Area
EU	European Union
F2M	Fixed to Mobile
FA	Football Association
FAD	Final Access Determination
FIFA	International Federation of Football Association
FTA	Free to Air
FTTB	Fibre to the Business
FTTH	Fibre to the Home
Gbps	Giga Bit Per Second
HD	High Definition
HSBB	High Speed Broadband Network
HSPA	High Speed Packet Access
IDA	Info-Communications Development Authority of Singapore
IOS	iPhone Operating System
IP	Internet Protocol
IPLC	International Private Leased Circuit

IPTV	Internet Protocol Television
IP-VPN	Internet Protocol Virtual Private Network
ISDN	Integrated Services Digital Network
ISP	Internet Service Provider
ITS	International Telephone Services
ITU	International Telecommunications Union
IXP	Internet Exchange Point
Kbps	Kilo Bit Per Second
KJS	Konsortium Jaringan Selangor
LAN	Local Area Network
LLC	Local Leased Circuit
LMDS	Local Multipoint Distribution Services
LSS	Line Sharing Service
LTE	Long Term Evolution
Mbps	Mega Bit Per Second
MCMC	Malaysian Communications and Multimedia Commission
MDA	Media Development Authority of Singapore
MDF	Main Distribution Frame
Metro-E	Metro-Ethernet
MMS	Multimedia Messaging Service
MNO	Mobile Network Operator
MSAP	Mandatory Standard on Access Pricing
MTAS	Mobile Terminating Access Service
MVNO	Mobile Virtual Network Operator
MyCC	Malaysia Competition Commission
MyIX	Malaysian Internet Exchange
NBA	National Basketball Association
OFCOM	The Office of Communications of UK
OPTA	The Independent Post and Telecommunications Authority of Netherlands
OSI	Open Systems Interconnection
OTT	Over-the-Top
PBX	Private Branch Exchange
POI	Point of Interconnection
POP	Point of Presence
PPDR	Public Protection and Disaster Relief
PSSB	Puncak Semangat Sendirian Berhad
PSTN	Public Switched Telephone Network
PTS	Postal Telecommunications Authority of Sweden

QoS	Quality of Service
RAS	Required Application Services
RTM	Radio Television Malaysia
RTR	Austrian Regulatory Authority for Broadcasting and Telecommunications
SD	Standard Definition
SDH	Synchronous Digital Hierarchy
SDSL	Symmetric Digital Subscriber Line
SEA	South East Asia
SLC	Substantial Lessening of Competition
SME	Small and Medium Enterprise
SMS	Short Messaging Services
SSNIP	Small but significant non-transitory increase in price
SUKMA	Sukan Malaysia
TRA	Telecommunications Regulatory Authorities
TVRO	Television Received Only
UHF	Ultra High Frequency
UK	United Kingdom
ULL	Unbundling Local Loop
UNE	Upstream Network Element
US	United States
VDSL	Very High Bit Rate Digital Subscriber Line
VHF	Very High Frequency
VOD	Video on Demand
VoIP	Voice Over Internet Protocol
VoLTE	Voice Over Long Term Evolution
VPN	Virtual Private Network
VSAT	Very Small Aperture Terminal
Wi-Fi	Wireless Fidelity
WiMAX	Worldwide Interoperability for Microwave Access
WLR	Wholesale Line Rental
3G	Third Generation
4G	Fourth Generation

Part A Public Inquiry

2 Background

2.1 The Malaysian Communications and Multimedia Commission (**MCMC**) is conducting a study on the assessment of dominance in the communications market.

2.2 In 2003, the MCMC undertook a dominance study which resulted in the publication of a public inquiry report on 8 December 2004 (**2004 Dominance Study**). This study was followed by a Commission Determination on Dominant Position in Communications Market (**Determination**) under section 137 of the *Communications and Multimedia Act 1998* (**CMA**), in which a number of licensees were found to be dominant in specified communications markets. The Determination was valid for a period of two years and has since lapsed.

2.3 Since the 2004 Dominance Study, the communications sector in Malaysia has experienced (and continues to experience) significant technological and product innovation. In the broadcasting sector, this has included the movement from linear to on-demand supply, the emergence of new cable operators, an increase in intermodal competition (for example internet protocol television (**IPTV**) versus traditional media platforms) and a planned migration from analogue to digital broadcasting scheduled to begin in 2015. In the telecommunications sector this has included the allocation of spectrum bands to support 4G technologies, the emergence of over-the-top (**OTT**) services and the introduction of triple-play bundles.

2.4 The MCMC has determined that it is timely to conduct another dominance study that addresses changes in the communications market (**Dominance Study**). The MCMC's Dominance Study has included a number of steps to date, which will ultimately culminate in the publication of a final dominance report (**Dominance Report**) together with final versions of the Market Definition Analysis, Guideline on Substantial Lessening of Competition, Guideline on Dominant Position and determination by the MCMC.

2.5 This Public Inquiry on the Assessment of Dominance in Communications Markets (**Public Inquiry**) assesses the state of competition in the Malaysian communications markets that were identified in the draft market definition analysis (**Market Definition Analysis**) dated 7 April 2014 that was circulated to selected licensees for comments.

2.6 Work on the Dominance Study commenced in November 2013. The first phase of the project involved gathering data and information on the Malaysian communications sector and key participants. For this purpose, a questionnaire was sent to all major licensees.

2.7 Following the issuing of the questionnaire, the MCMC met with licensees in November 2013. The purpose of these meetings was to introduce the

Dominance Study to licensees and discuss any questions from licensees arising from the questionnaire.

2.8 The feedback and comments that were received during this licensee engagement process have been incorporated in this Public Inquiry where possible. Any information that was provided to the MCMC on a confidential basis and which the MCMC is satisfied is not otherwise available from public sources has been redacted and marked with the reference "c-i-c" (i.e. commercial-in-confidence). This information has been used by the MCMC in formulating its views and is referred to in this Public Inquiry Paper, but not disclosed due to confidentiality restrictions.

2.9 Given the significance of the findings of the final Dominance Report, the MCMC has posed a series of questions throughout this Public Inquiry in relation to the MCMC's preliminary dominance findings for each of the communications markets identified by the MCMC. Any feedback that is received to these questions will help verify and improve the accuracy of the MCMC's final dominance assessments.

2.10 Finally, during the informal consultation process, some licensees raised competition concerns with the MCMC. Examples of anti-competitive conduct are considered in this Public Inquiry Paper to the extent that they support an assessment of dominance in a particular market. However, the purpose of this initiative is not to address anti-competitive conduct. Therefore, licensees are encouraged to lodge a formal competition complaint (along with any supporting evidence) with the MCMC if they have any competition concerns.

3 Feedback

3.1 This Public Inquiry sets out the MCMC's proposed dominance assessment in the markets for a range of communications-related products, services and facilities.

3.2 This Public Inquiry Paper constitutes the first step in the formal consultation process and all persons will have an opportunity to respond to this Public Inquiry Paper. Persons will be given 45 days to provide feedback on the proposed dominance assessments by 25 August 2014. Any comments that are received at the conclusion of the review period will be considered by the MCMC and fed into the final Public Inquiry Report on Dominance.

4 Legislative context

4.1 The CMA governs the communications and multimedia industries in Malaysia and establishes the regulatory and licensing framework applicable to these industries.

Objects and national policy objectives

4.2 This Public Inquiry will be conducted in accordance with the objects and national policy objectives of the CMA. The objects of the CMA are set out in section 3(1) as follows:

(a) to promote national policy objectives for the communications and multimedia industry;

(b) to establish a licensing and regulatory framework in support of national policy objectives for the communications and multimedia industry;

(c) to establish the powers and functions for the Malaysian Communications and Multimedia Commission; and

(d) to establish powers and procedures for the administration of this [Communications and Multimedia] Act.

4.3 The national policy objectives are set out in section 3(2) as follows:

(a) to establish Malaysia as a major global centre and hub for communications and multimedia information and content services;

(b) to promote a civil society where information-based services will provide the basis of continuing enhancements to quality of work and life;

(c) to grow and nurture local information resources and cultural representation that facilitate the national identity and global diversity;

(d) to regulate for the long-term benefit of the end user;

(e) to promote a high level of consumer confidence in service delivery from the industry;

(f) to ensure an equitable provision of affordable services over ubiquitous national infrastructure;

(g) to create a robust applications environment for end users;

(h) to facilitate the efficient allocation of resources such as skilled labour, capital, knowledge and national assets;

(i) to promote the development of capabilities and skills within Malaysia's convergence industries; and

(j) to ensure information security and network reliability and integrity.

Public inquiry provisions

4.4 Chapters 2 and 3 of Part V of the CMA contain provisions that set out the powers and procedures of the MCMC. The key provisions that provide the legislative grounds for undertaking this Public Inquiry include:

(a) Section 55 – the MCMC may make a determination that a licensee is in a dominant position in a communications market in accordance with the powers and processes set out in this clause;

(b) Section 58 – the MCMC may hold a public inquiry on any matter which relates to the administration of the CMA where the MCMC is satisfied that the matter is of significant interest to the public or to licensees;

(c) Section 61 – the MCMC must provide notice of the terms and scope of the public inquiry and must allow members of the public to make submissions on the public inquiry which will be considered by the MCMC;

(d) Section 63 – the MCMC will not publish or disclose confidential information provided during the public inquiry process; and

(e) Section 65 – the MCMC must publish a report within 30 days of the conclusion of a public inquiry that sets out the findings of any inquiry it conducts.

Competition provisions

4.5 Chapter 2 of Part VI of the CMA is concerned with General Competition Practices. It contains various prohibitions that are applicable to all licensees, such as the prohibitions on anti-competitive conduct (under section 133), collusive agreements (under section 135) and tying or linking arrangements (under section 136).

4.6 The relevant provisions of the CMA for the purposes of this Public Inquiry and the broader Dominance Study are as follows:

(a) Section 134 – the MCMC has the power to publish guidelines which clarify the meaning of "substantial lessening of competition";

(b) Section 137 - the MCMC may determine that a licensee is in a dominant position in a communications market;

(c) Section 138 - the MCMC has the power to publish guidelines that clarify how it will apply the test of 'dominant position' to a licensee; and

(d) Section 139 – the MCMC has the power to direct a licensee in a dominant position to cease conduct which has, or may have, the effect of substantially lessening competition in a communications market.

4.7 Under section 140, a licensee may apply to the MCMC for authorisation prior to engaging in any conduct which may be construed to have the purpose or effect of substantially lessening competition in a communications market. The MCMC may authorise the conduct if it is satisfied that the authorisation would be in the national interest.

5 Outputs of public inquiry process

5.1 The objective of this Public Inquiry is to identify those licensees that are in a dominant position for the purposes of a determination under section 137 of the CMA and to put in place a framework which permits the dynamic assessment and findings of dominance in the future.

5.2 As part of this Public Inquiry, the MCMC will finalise the following documents which will be referred to when making dominance assessments:

(a) the Market Definition Analysis document;

(b) the revised Guideline on Dominant Position (**Dominance Guideline**); and

(c) the revised Guideline on Substantial Lessening of Competition (**SLC Guideline**).

5.3 During the Public Inquiry process, the MCMC will assess and identify the licensees (if any) that are dominant in each of the communications markets identified by the MCMC. The MCMC's preliminary findings will be set out in this Public Inquiry.

5.4 Following a 45 day public consultation on the results of this Public Inquiry, the MCMC will make a final assessment of dominance for each communications market which will culminate in the publication of:

(a) the Dominance Report, in which the MCMC will consider any feedback that it receives from the industry before setting out its final position on the dominance assessments for each communications market that are made in this Public Inquiry; and

(b) the MCMC determination on dominant position in communications markets under section 137 of the CMA, which will list licensees (if any) that are found to be dominant in specified communications markets.

5.5 The MCMC's final assessment of dominance for each communications market will be used to support the decision about whether to issue a direction to a licensee in a dominant position in a communications market under section 139.

5.6 The Dominance Study will not include a consideration of specific conduct by licensees in a dominant position for the purposes of section 139, however

the MCMC's approach to the exercise of its powers under section 139 will be addressed in the MCMC's SLC Guideline.

5.7 It should also be noted that section 139 is not the only provision which deals with anti-competitive conduct under the CMA. As noted in section 3 above, there are other provisions in Chapter 2 of Part VI of the CMA which are also highly relevant and which, importantly, do not rely on a finding of dominance. That is, non-dominant licensees may still commit offences under Chapter 2 of Part VI of the CMA irrespective of any dominance finding for the purposes of section 139.

6 Overview of analytical framework

6.1 Determining whether a licensee is in a dominant position in a communications market involves a two-step process.

6.2 First, the MCMC must define the relevant communications markets. The key concept in a market definition exercise is the concept of substitutability. Market definition typically requires consideration of the following:

(a) The product dimension. This involves identifying all of the products and services supplied in the market using the concept of substitutability. Products and services will be considered 'substitutable' if customers and suppliers consider the products or services to be close alternatives.

(b) The temporal dimension. This involves identifying the time period over which products and services are supplied. Products and services supplied in one time period will be considered part of the same market as products and services supplied in another time period if customers and suppliers consider products and services supplied in those time periods to be substitutable.

(c) The geographic dimension. This involves identifying the geographic area in which products and services are supplied in the market.

(d) The functional dimension. This involves identifying the level of the supply chain at which products and services are sold. In communications markets, this usually involves a consideration of the retail and wholesale levels of the market.

6.3 Second, the MCMC assesses whether a licensee is dominant in the defined markets. Determining dominance requires a consideration of the competitive constraints faced by a licensee in the relevant communications market. The following are key factors:

(a) the structure of the market and the nature of competition in that market, including the relative market shares of all market participants and the competitive dynamics in the market;

(b) barriers to entry and expansion;

(c) countervailing power of buyers; and

(d) the nature and effectiveness of economic regulation (if any).

6.4 The MCMC has been considering relevant communications markets in its Market Definition Analysis. The MCMC will make assessments of potential dominance in each of these markets determined as part of this Public Inquiry.

6.5 The framework that will ultimately be put in place will also allow the MCMC to quickly and efficiently re-assess dominance in the future, including during the assessment of conduct from time to time. This may include a re-assessment of dominance of two non-dominant licensees that merge to be in a dominant position.

6.6 The MCMC's proposed analytical framework is based on international best practice and the principles that are applied by the antitrust authorities and the courts of, inter alia, Australia, Europe and the United Kingdom in relation to market definition and the assessment of dominance. In undertaking this Public Inquiry, the MCMC has also had regard to the particular characteristics of the Malaysian communications sector and the earlier feedback obtained from market participants.

7 Market definition

7.1 The MCMC made preliminary findings of twenty-six retail and wholesale communications aggregated markets in its Market Definition Analysis, although the MCMC notes that some of the markets summarised into these twenty-six retail and wholesale markets actually comprise a number of separate markets.

7.2 The Market Definition Analysis was circulated to selected licensees on 7 April 2014 as part of an informal consultation process. The licensees were given 30 days to comment on the MCMC's proposed communications markets.

7.3 A summary of the comments that were received during the informal consultation process and the MCMC's findings on each communications market are set out below in Part B of this Public Inquiry.

7.4 Following this process, the MCMC made the following amendments to the preliminary markets set out in the Market Definition Analysis in response to comments received from licensees:

(a) data-based OTT messaging services are now included in the national retail market for mobile messaging services and mobile messaging has been removed as a separate wholesale market. Termination of calls and messages is included in a separate market;

(b) aerial cabling and sewer facilities are no longer included as possible substitutes in the national market for access to lead-in ducts and manholes; and

(c) the geographic scope of the following markets is now considered to be on individual basis for each service, facility or network element (as applicable):

(i) inter-connect links;

(ii) access to exchange buildings and co-location;

(iii) access to main distribution frames and associated in-building wiring (and other in-building facilities); and

(iv) access to common in-building mobile systems.

7.5 An updated summary of the MCMC's proposed communications markets is set out in Figure 1 below. The MCMC invites further comments on the proposed markets as part of this Public Inquiry.

Figure 1: Summary of proposed communications markets in Malaysia

No	Communications market	Geographic scope
Retail		
1.	Fixed telephony (including VoIP) (a) Access line and local calls (Business) (b) Access line and local calls (Residential) (c) National calls (separate Business/Residential) (d) International calls (separate Business/Residential) (e) Fixed-to-mobile calls (separate Business/Residential)	National market
2.	Fixed broadband and data (a) High speed and quality (Business) (b) Low speed and quality (Residential)	National market
3.	Mobile telephony	National market
4.	Mobile broadband and data (including WiMAX)	National market
5.	Mobile messaging services (including SMS and OTT messaging)	National market
6.	Transmission (tails) or local leased lines	National market
7.	Transmission (international) or international private leased circuits (**IPLCs**)	National market
8.	Domestic managed data services	National market
9.	International managed data services	National market
10.	Directory services (a) Voice or call centre services (b) Online directories (c) Published directories	National market
11.	Broadcasting services (a) Free-to-air (**FTA**) (b) Subscription television	National market
Wholesale		
12.	Fixed telephony (including VoIP) (a) Access Line (Business) (b) Access Line (Residential) (c) Local calls (Business/Residential) (d) National calls (Business/Residential) (e) International calls (Business/Residential) (f) Fixed-to-mobile calls (Business/Residential)	National market

No	Communications market	Geographic scope
13.	Fixed broadband and data (Business/Residential)	National market
14.	Mobile telephony	National market
15.	Mobile broadband and data (including WiMAX)	National market
16.	Transmission (inter-exchange)	National market, excluding the route from Peninsular Malaysia to East Malaysia Route from Peninsular Malaysia to East Malaysia
17.	Transmission (tails) or local leased lines	National market, except in certain limited circumstances
18.	Transmission (international) or IPLCs	National market
19.	Transmission to submarine cable landing stations and earth stations	Boundaries of each individual point of presence
20.	Broadcasting transmission: (a) to broadcast towers (b) for digital transmission	National market
21.	Content acquisition: (a) Premium content (b) Other ordinary content	National market
22.	Termination (fixed and mobile) calls and messages	Each terminating network
23.	Origination (fixed and mobile) calls	Each originating network
24.	Inter-connect links	Each individual link
25.	Wholesale Internet interconnection	National market
26.	Access to facilities and upstream network elements (a) Access to lead-in ducts and manholes (b) Access to inter-exchange and mainline ducts (c) Access to towers (d) Access to exchange buildings and co-location (e) Access to submarine cable landing stations and earth stations (f) Access to local access services, including local loop unbundling, sub-loops, line sharing and bitstream services (g) Access to dark fibre (h) Access to main distribution frames and associated in-building wiring (and other in-building facilities) (i) Access to common in-building mobile systems	Individual markets for access to each facility and network element, except: (a) state based market for access to towers; (b) national market for access to lead-in ducts and manholes; (c) national market for access to inter-exchange and mainline ducts; (d) national market for access to local access services; and (e) national market for access to dark fibre.

Summary of submissions on Market Definition Analysis (general)

7.6 The MCMC notes that several licensees have provided some general comments on the Market Definition Analysis. More specific comments in relation to each communications market are summarised below in Part B.

7.7 Some of the key issues and comments that were raised by licensees include:

(a) Markets should not be pre-defined for the purpose of *ex post* competition enforcement. One licensee submits that the MCMC's exercise of pre-defining communications markets for the purpose of facilitating future *ex post* competition enforcement efforts is inconsistent with international best practice. Instead, the licensee claims that the MCMC should seek to define the relevant market only when it engages in *ex post* competition enforcement efforts, which the licensee notes is the approach taken by competition regulators in other jurisdictions (e.g. the United Kingdom, Australia, the United States, and the European Union).

(b) Market definitions should not be analysed in a vacuum. A licensee claims that market definition for *ex post* competition enforcement should be undertaken in relation to a focal product or service (i.e. the product/service which is the subject matter of investigation) in order to identify the competition. The licensee submits that market definition cannot be undertaken in a vacuum, as proximity to the conduct and allegations on effect is critical.

(c) Communications sectors are characterised by rapid change and disruptive technologies. As such, one licensee submits that the MCMC should not predetermine market definitions in the communications sector due to its fast-changing nature. However, the licensee also notes that this issue is discussed in the Market Definition Analysis[1] and supports the MCMC's proposed dynamic approach to dominance.

(d) The focus should be on impacts at the retail level. A licensee submits that, for most products in the communications market, the primary functional market to analyse should be at the retail level. If a retail market is competitive and is not subject to dominance, then the level of competition at the wholesale level should not typically concern the regulator further.

(e) Use of "sufficiently interchangeable" instead of "close substitutes." A prominent mobile services provider notes that the EU considers substitution from the angle of "sufficiently interchangeable" which is less stringent than the "close substitutes" threshold proposed by the MCMC. The operator notes that following the MCMC's current approach may lead to too narrow a market definition and separate

[1] See: paragraph 1.3 of Part A of Market Definition Analysis.

markets being declared, which would be a variance from commonly held positions or observances elsewhere.

(f) Insufficient evidence to support proposed market definitions. A licensee submits that the MCMC has not provided enough evidence to support its proposed market definitions. The licensee would like to see data from a market survey or feedback solicited from customers included in the Market Definition Analysis.

(g) Undue regulatory burdens and risks distorting competition. A provider submits that pre-defining markets may impede the ability of certain licensees to compete effectively and fairly as the alleged dominant licensees may be unfairly subjected to allegations of abuse of dominance by their competitors or scrutiny by the MCMC. A similar position was supported by another licensee, which claimed that by defining a large number of separate product markets there was a risk of "micro-regulation" which could ultimately create obligations on sectors that were otherwise relatively competitive.

(h) Number of communications markets should align with European approach. Several licensees submit that the MCMC has defined too many communications markets when compared with the approach taken in other jurisdictions, particularly the EC.

MCMC response to comments on Market Definition Analysis (general)

7.8 Several licensees submit that the MCMC should not pre-define markets for the purpose of *ex post* competition enforcement. Similarly, various licensees note that communications markets tend to be characterised by rapid change and disruptive technologies. The MCMC accepts that markets, particularly communications markets, are continually evolving and changing over time. For this reason, the MCMC has stated that it will take a dynamic approach to market definition and will not be bound to its preliminary market definitions (see paragraph 2.6 of Part A of Market Definition Analysis). The MCMC notes that several licensees support taking a dynamic approach to market definition and dominance assessment.

7.9 Some licensees have called for the MCMC to scale down the number of markets that it defines. For example, one licensee submits that the MCMC should focus the Dominance Study only at the retail level. These licensees claim that such an approach would be more in line with the approach that is currently applied in other jurisdictions, particularly in Europe.

7.10 The MCMC considered the European approach to market definition in the Market Definition Analysis. Where applicable, the MCMC applied the European Commission findings to the Malaysian context. However, there are key differences in Europe which help explain the different findings on market definition. In particular, the MCMC notes that the European Commission only defines markets where competition issues are believed to

exist. This has led the European Commission to define fewer markets that are typically focused at the wholesale level only.

7.11 In Malaysia, the MCMC is responsible for overseeing a broader range of communications markets under the CMA. As such, it is important to identify all relevant communications markets to ensure effective governance and oversight is taking place. However, the MCMC notes that, just because a market has been identified does not necessarily mean that a finding of dominance will be made. On the contrary, many of the dominance assessments in Part B of this PI Paper below have not resulted in a finding of dominance.

7.12 Lastly, the MCMC notes licensee claims that some of the MCMC's preliminary market definitions are based on insufficient evidence. The MCMC based its Market Definition Analysis on interviews with licensees from most communications markets, questionnaire responses from key industry participants and extensive research on each of the proposed communications markets. However, the MCMC welcomes further data or information for consideration before it finalises its proposed market definitions. In particular, a list of questions and requests for industry feedback is set out in Annexure 1 of this PI Paper.

8 Assessment of dominance under the Dominance Guideline

8.1 The MCMC's analytical framework for assessing a dominant position in a communications market is set out in the revised draft Dominance Guideline published together with this Public Inquiry. This is the framework that has been applied by the MCMC in this Public Inquiry when assessing dominance in the markets set out in Part B.

8.2 The MCMC circulated a draft of the Dominance Guideline to selected licensees on 7 April 2014. The MCMC has reviewed the submissions that were received during the informal consultation process. A summary of these submissions and the MCMC's findings on the Dominance Guideline is set out below. The MCMC invites comments on the revised draft Dominance Guidelines.

8.3 The MCMC's approach to determining which licensees are dominant will be undertaken in a dynamic way. Markets and competition in those markets are continually evolving. Markets may change and licensees' power within those markets may also change. Therefore, while markets determined during the public inquiry process will be very helpful when examining conduct in the future, the MCMC will not be bound by the markets or its determination of dominance in this Public Inquiry when assessing conduct.

8.4 Importantly, it should be noted that a finding of dominance does <u>not</u> connote or imply that any offence has been committed by the dominant operator. In many cases, a position of dominance may have been obtained or accrued due to legacy/historical reasons, regulatory restrictions or due to

obtaining a high market share through out-competing rivals. Indeed, dominance may have been the result of a lack of investment or activity by the dominant firm's rivals.

8.5 For the MCMC's powers under section 139 to be enlivened, a licensee that is considered to be in a dominant position must also engage in conduct that has, or may have, the effect of substantially lessening competition. It is only upon the engaging of such conduct that such powers are triggered. A mere finding of dominance is not an offence and does not trigger the power under section 139 in and of itself.

8.6 Finally, the MCMC also notes that it has a relatively high degree of dependence on third party complainants to provide evidence-based complaints in order for the MCMC to be able to take forward an investigation of conduct for the purposes of section 139. The SLC Guidelines set out the types of conduct and forms of evidence required to support a finding that a direction should be issued under section 139. While the MCMC may also undertake investigations under its own initiative, the MCMC wishes to emphasise the importance of cooperation and information from complainants when considering whether conduct contravenes section 139.

Analytical framework for assessing dominance in a market as set out in the Dominance Guidelines

8.7 In assessing whether a licensee is in a dominant position for the purposes of section 137 of the CMA, the MCMC will consider the following key factors:

(a) the structure of the market and the nature of competition in that market, including market shares;

(b) barriers to entry and expansion;

(c) countervailing power of buyers; and

(d) the nature and effectiveness of economic regulation (if any).

8.8 The MCMC may also consider the possibility of collective dominance or dominance by a corporate group in a particular communications market, where applicable.

8.9 The MCMC may derive the existence of a dominant position from either a single factor or from a number of factors that are not of themselves determinative.

Market structure and the nature of competition

8.10 The nature and degree of actual competition in a communications market is an important factor in the assessment of dominance. In general terms, the more competitive a market is, the less likely it is that a licensee will be found to be dominant in that market.

8.11 When analysing the nature and degree of actual competition in a communications market for the purposes of assessing dominance, the MCMC will consider the following factors:

(a) the relative market shares of each of the participants in the market in question; and

(b) the competitive dynamics in a market.

8.12 Market share is a useful first indicator of dominance. It provides the MCMC with an initial indication of the market structure and of the relative importance of the various participants in the market.

8.13 In general terms, a high market share may indicate that a licensee is dominant in a market if it has held that market share for a significant period of time. Conversely, if a licensee has a relatively low market share, or its market share has been eroded significantly over time while its competitors' shares have increased, this may indicate that the licensee is not dominant in a market.

8.14 However, the MCMC recognises that market share can be an imperfect indicator for dominance. For example, a licensee with a significant share of the market may still be found not to be in a dominant position in that market due to other factors, including very low barriers to entry or regulation. On the other hand, a licensee which has a relatively low market share but is faced with less competition from only a few competitors in a market where barriers to entry are high, may be determined to be in a dominant position. Therefore, a high market share will not, of itself, be considered by the MCMC to be conclusive evidence that a licensee is in a dominant position.

8.15 Where possible, the MCMC will consider changes in market share over time for the purposes of assessing dominance. The higher the market share and the longer the period of time over which that market share is held, the greater the likelihood of the existence of a dominant position. For this reason, the MCMC will consider the durability of market share as an important indicator of dominance (where such information is available).

8.16 The relative distribution of market share in the market is also an important consideration when making an assessment of dominance. This is particularly the case where the market is characterised by high levels of concentration.

8.17 When analysing market share data, the MCMC will consider:

(a) the current market share of the licensee as against the market shares of its competitors in the relevant communications market; and

(b) the changes in the licensees market shares over time (where such information is available).

8.18 In addition to market shares, the MCMC will also consider the following factors (where relevant) to assess the competitive dynamics in a communications market:

(a) Indirect constraints. A licensee that has a significant share of a market may be constrained from increasing prices or reducing output as a result of competition in a downstream market.

(b) Pricing behaviour. The pricing behaviour of participants in a market and pricing trends over time may reveal the competitiveness of a market. In particular, if a licensee's pricing has remained unchanged over a substantial period of time, this could suggest a dominant position if there has been new entry during that time.

(c) Existence of a vigorous and effective competitor. The presence of a vigorous competitor, even if that competitor has a relatively low market share, may act as an effective constraint on the ability of a licensee to increase prices or reduce output.

(d) Innovation. A market characterised by rapid technological change may mean that dominance will be short lived.

8.19 The MCMC will also consider the level of vertical integration present in the market in the assessment of dominance. Vertical integration may contribute to a dominant position in a market if a vertically integrated licensee controls access to a key input into a downstream market or provides a licensee with benefits such as advantageous supply terms for key inputs that are not available to other competitors in the market. The level of vertical integration present in a communications market will be relevant to the consideration of both the nature of existing competition and potential competition.

Potential competition

8.20 The effectiveness of potential competition as a constraint on the ability of a licensee to increase prices or limit output is dependent on the ease with which potential entrants or existing competitors can enter into or expand operations in a market. A licensee is likely to be constrained by potential competition if entry or expansion is likely, timely and of a sufficient scale and scope.

8.21 An assessment of whether entry or expansion is likely to constrain a licensee requires consideration of the barriers to entry or expansion in the market. Where there are no or very low barriers to entry, a licensee is unlikely to be in a position to increase prices or reduce output due to the threat that other firms may enter the market or expand their operations and take its market share.

8.22 Barriers to entry and expansion come in many forms. Some barriers may be inherent features of a particular market (e.g. scarce resources that are necessary for operation such as spectrum). Other barriers may be due to

competitor conduct in the market, such as entry into exclusive arrangements with suppliers.

8.23 In analysing whether a licensee is in a dominant position in a relevant communications market, the MCMC will consider whether the following factors are likely to give rise to barriers to entry or expansion:

(a) Cost of entry/expansion. The communications sector is characterised by high sunk costs and significant capital investment is often required for viable market entry. These costs can serve as a barrier to entry or expansion by competitors.

(b) Access to facilities and inputs. The communications sector is dependent on access to key resources such as infrastructure, spectrum and content. The potential difficulties associated with accessing these inputs may deter new entrants or existing participants from expanding their operations.

(c) Regulatory and legal requirements. Regulatory and legal constraints such as onerous reporting obligations and obtaining licences may deter new entrants or impose additional burdens on existing participants looking to expand.

(d) Contractual restrictions. The existence of long term supply contracts in a market can constitute a barrier to entry if it prevents or restricts potential entrants from accessing key inputs or customers.

(e) Economies of scale and/or scope. Significant economies of scale or scope in a market may constitute a barrier to entry. Economies of scale result from the ability to spread fixed costs over a broader customer base, whereas economies of scope result from the ability to spread fixed costs over a broader set of products or services. Economies of scale and scope are common in communications markets due to the high fixed cost of network infrastructure and the low marginal cost of supply.

(f) Conduct by incumbents. Incumbents can respond to new entrants by increasing their advertising, competing aggressively on price and in some cases by utilising anticompetitive strategies such as predatory pricing. Incumbents can also create information barriers or information preferences.

Countervailing buyer power

8.24 Countervailing buyer power exists where there are one or more customers in the market who are able to constrain the independence of the relevant firm, particularly its ability to set prices or terms of supply.

8.25 The countervailing power of buyers can function as a competitive constraint on a licensee, preventing it from behaving independently and from setting prices above the competitive level.

8.26 The MCMC will consider the following factors to determine whether there is countervailing buyer power in a relevant communications market:

(a) The number and size of customers in the market. Where there is a high degree of concentration amongst buyers compared to suppliers, buyers are more likely to be in a position to constrain the activities of suppliers.

(b) The ability for customers to bypass the supplier by acquiring the products or services from another supplier. This will include a consideration of the costs of switching suppliers. However, in some cases, it may be very difficult for customers to switch suppliers or sponsor new entry, even where the customers have strength in terms of market share.

(c) The ability for customers to bypass the supplier by 'sponsoring' market entry. A customer with significant financial resources may wield significant countervailing power in a market if it can 'sponsor' a new entrant to enter the market.

(d) The ability of the customer to vertically integrate to bypass the supplier. The ease with which a customer can move along the vertical supply chain in response to a change in price or terms of supply will often place an effective constraint on a supplier.

(e) The switching costs borne by customers in the market. The switching costs of customers should be compared against the switching costs of suppliers. If suppliers face a higher switching cost than customers, this could indicate the existence of countervailing buyer power.

Economic regulation

8.27 The effect of access regulation under the CMA will be considered by the MCMC in order to determine whether a licensee is being sufficiently constrained in a communications market.

8.28 The existence of access regulation will not prevent a licensee from being determined to be in a dominant position if it does not provide an effective constraint on the ability of a licensee to act independently in a market. For example, a licensee which is subject to regulated pricing may still have the ability to act independently in the market by means other than price-related.

8.29 Further, access regulation may only constrain the activities of licensees in relation to particular products supplied in a market rather than more generally in the market. For example, a licensee may be subject to regulated pricing for only one component of a bundled product or in particular areas.

Joint dominance

8.30 The concept of joint dominance refers to a situation in which two or more firms together or collectively possess a dominant position in a market.

8.31 The CMA does not directly contemplate the existence of joint dominance in a communications market. However, the MCMC may determine that a licensee is dominant in a communications market exhibiting oligopolistic characteristics.

Corporate groups

8.32 The MCMC takes a broad view of the meaning of "licensee" for the purposes of section 137 of the CMA so that a licensee is responsible for any intra-company arrangements within the licensee's group of companies. The licensee should also be responsible for intra-company transactions, including transactions where a non-licensed company acquires content and on-supplies that content to the licensee (who is a member of the same group of companies).

8.33 This approach is similar to the approach taken in the European Union (EU). A parent company and any subsidiaries over which the parent exercises "decisive influence" are deemed to be part of the same undertaking for the purposes of the EU competition rules.

8.34 The MCMC will take into account all of the licensee's group companies for the purposes of determining dominance under section 137 of the CMA and a determination that a licensee is in a dominant position will apply to all of the licensee's group companies. The MCMC refers to a licensee's group companies as "collectively" dominant if there is a dominance finding, to distinguish it from "joint" dominance referred to above.

Summary of submissions on Dominance Guideline

8.35 The MCMC received comments from a number of licensees on the draft Dominance Guideline, as well as the MCMC's approach to the Dominance Study and the regulation of dominance more generally. A high level summary of key or recurring comments is provided below, grouped by subject matter.

General approach to Dominance Guideline

8.36 One licensee noted that much of the revised Dominance Guideline is based loosely on the current Guideline on Dominant Position in a Communications Market 2000. The licensee requested that the MCMC provide a separate section in the draft Dominance Guideline to describe material/significant changes and the thinking behind such amendments.

8.37 A prominent MVNO requests that the MCMC follow the European Commission (EC) and take a dynamic view of how the market will develop in the future. The development of dynamic market definitions will allow the

MCMC to use the market definition process to look ahead and focus on markets that require additional regulatory support.

8.38 A prominent mobile provider notes that the Dominance Guideline should have reference to some competition objectives, including the promotion of effective competition for the long term benefit of the end user. Such objectives provide useful guidance during the process of competition assessments.

Timing of dominance assessments

8.39 One licensee requested greater clarity on the timing that the MCMC will take when making an assessment of dominance. In particular, the licensee points to paragraphs 1.10 and 2.4 of the Dominance Guideline, where phrases like "*from time to time*" and "*at any time*" are used in relation to the timing of a dominance assessment. In particular, the licensee seeks clarity on whether the MCMC is proposing to depart from its current process of conducting an assessment of dominance on the communications sector as a whole rather than for individual licensees. The licensee would prefer regular pre-scheduled or periodic assessments of major markets to reduce disruption to the business and to better prepare resources to support the MCMC in any assessment of dominance.

Market share

8.40 Several licensees have commented on the MCMC's proposed approach to market share in making an assessment of dominance in a particular market. Some of the common themes or issues that were raised include:

(a) Various licensees have taken contrasting views on what the appropriate market share should be in order to be considered "high."[2] One licensee notes that other jurisdictions with more mature markets typically view market share of 50% as being a better indicator of possible dominance. The licensee concludes that the MCMC should adopt the 60% market share threshold that is currently used by the Malaysian Competition Commission (**MyCC**) when gauging a "high" market share. On the other hand, another licensee claims that a 40% market share is too high and should be lowered closer to 20% market share.

(b) Another licensee claims that the MCMC should not apply a market share threshold as an indicator for dominance at all. In particular, the licensee disagrees with the adoption of a market share threshold as an indication of dominance, because (a) market shares are an imperfect indicator for dominance; and (b) the communications market in Malaysia, as in the rest of the world, is highly dynamic.

[2] Note that the current indicator proposed by the MCMC is 40% market share (see: paragraph 4.16(a) of the Dominance Guideline).

8.41 Several licensees submit that the MCMC should take into account factors other than revenue when calculating market share in a particular market. One such licensee notes that the EU views both volume and value sales as also being useful, but ultimately the choice depends on market characteristics. In other words, revenue share should not be the primary indicator.

Interpretation of "licensee" and joint dominance

8.42 One licensee submits that the MCMC should provide additional clarity as to whether its interpretation of "licensee" will result in overlap between the jurisdiction of the MCMC and the MyCC. The licensee notes that the MCMC proposes to adopt a broad view of the meaning of "licensee", such that it will take into account all of the licensee's group companies for the purposes of determining dominance under section 137 of the CMA. The licensee requests that the MCMC make it clear that a licensee's group of companies will be taken into account not only in relation to section 137, but as appropriate across all the relevant provisions of the CMA.

8.43 A prominent mobile licensee notes that it will be difficult to partake in 'joint' or 'collective' dominance in the mobile services markets. The large number of firms already in the market and existing provisions in the CMA (e.g. prohibitions on tying/linking, rate fixing, etc.) would make it difficult to enter into anti-competitive arrangements with a rival.

International approaches to dominance

8.44 One licensee notes that in many cases international best practice may not apply to the Malaysian context, particularly given the emphasis on convergence in the CMA. The licensee advocates following the US, UK and Japanese approaches to dominance with less emphasis on the European law and legal principles.

8.45 However, a prominent MVNO endorses the current approach taken by the MCMC, including following international best practice where possible and adapting the EU framework for the Malaysian context.

Shift of regulatory focus from fixed to mobile sector

8.46 A fixed-line operator claimed that the MCMC should shift its regulatory focus, including in relation to dominance, to take into account the declining trend in fixed services revenue. The operator claims that the current approach, which more heavily regulates fixed services over mobile services, is creating market distortions. The operator proposes merging fixed and mobile markets to better align with the emphasis on convergence in the CMA and to better regulate market failures.

MCMC response to comments on Dominance Guideline

8.47 The MCMC has considered the submissions that were received from selected licensees during the informal consultation process.

8.48 The MCMC offers the following points in response to some of the key issues that were raised by licensees during the informal consultation process:

(a) A licensee submits that the MCMC should follow the European Commission and take a dynamic approach to market definition that considers how the market will develop in the future. As discussed in the previous section, the MCMC acknowledges that communications markets are continually evolving and changing over time. For this reason, the MCMC has expressly stated that it will take a dynamic approach to market definition and the assessment of dominance at paragraphs 2.2 to 2.4 of the Dominance Guideline.

(b) A prominent mobile provider requests that the Dominance Guideline include a reference to some competition objectives, including the promotion of effective competition for the long term benefit of the end user. The MCMC is required to consider the 'Objects' of the CMA, as set out in section 3 of the CMA, when taking action under section 139 of the CMA. Further, the MCMC also notes that the 'Objects' of the CMA are expressly included in the SLC Guideline.

(c) A licensee requested greater clarity on the timing that the MCMC will take when making an assessment of dominance. As discussed above, the MCMC recognises that markets are highly dynamic. Therefore, the MCMC will continually re-assess the state of competition in the market and take action if and as necessary. The MCMC will also evaluate any competition complaints that it receives from licensees to assess whether further action is required. Ultimately, the MCMC will conduct investigations and respond to public complaints at all times in accordance with the powers and procedures set out in Chapter 4 of Part V of CMA.

(d) The MCMC notes that several licensees provided comments on the MCMC's example of a 'high' market share. Licensees were split as to whether a 40% market share was too high or too low, and several other licensees opposed the use of a market share threshold at all. To clarify, the MCMC views market share as one (of many) possible indicators of dominance. However, the MCMC's view that a market share of more than 40% is 'high' is not intended to be a threshold for determining dominance. Therefore, the MCMC proposes to keep its example of a 'high' market share in the Dominance Guideline, but the MCMC also notes that this figure will be viewed as a possible indicator of dominance only.

(e) Several licensees have submitted that the MCMC should take into account factors other than revenue when calculating market share in a particular market. The MCMC notes at paragraph 4.17 of the Dominance Guideline that, while revenue is often a primary consideration when calculating market share, other factors such as share of subscribers or number of towers (among other things) may also be used to calculate market share. This comment has also

been taken into account in the dominance assessments in Part B of this PI Paper.

(f) Various licensees identified other jurisdictions which they believed the MCMC should follow when undertaking a dominance assessment. The MCMC notes that in preparing the Dominance Guideline and SLC Guideline, a comprehensive jurisdictional review was undertaken to identify the key international approaches to assessing dominance. Based on the findings of the jurisdictional review, the MCMC drafted the Dominance Guideline based on what it considered to be international best practice as it related to the local context in Malaysia (e.g. using "close substitutes" instead of "sufficiently interchangeable"). However, the MCMC will continue to monitor and consider developments in other jurisdictions on an ongoing basis.

(g) A fixed-line operator claimed that the MCMC should shift its regulatory focus (broadly and more specifically in relation to dominance) to take into account the declining trend in fixed services revenue. The MCMC notes that it will take a neutral approach to the application of the Dominance Guideline and SLC Guideline. This means that one particular market will not be under more scrutiny than another, rather each market will be considered and the potential competitiveness of that market assessed on its merit. The MCMC also notes that factors such as convergence will be considered when applying the Dominance Guideline.

8.49 The MCMC also notes that a number of licensees provided comments on the state of competition and the potential for dominance in particular communications markets. These comments are considered by the MCMC in the dominance assessments set out in Part B of this Public Inquiry Paper.

8.50 The Dominance Guideline is available in draft form on the MCMC website. The MCMC welcomes further submissions on the Dominance Guideline as part of the consultation process.

Question A1

The MCMC is seeking views on the following:
(a) Do you have any further comments on the Dominance Guideline?

9 Assessing 'substantial lessening of competition' under the SLC Guideline

9.1 The MCMC has prepared a revised draft SLC Guideline following feedback from selected licensees. Section 134 of the CMA gives the MCMC the power

to publish guidelines which clarify the meaning of "substantial lessening of competition".

9.2 The MCMC circulated a draft of the SLC Guideline to selected licensees on 7 April 2014. The MCMC has reviewed the submissions that were received during the informal consultation process. A summary of these submissions and the MCMC's findings on the SLC Guideline is set out below. The MCMC invites comments on the revised draft SLC Guideline.

9.3 The revised draft SLC Guideline outlines the MCMC's general approach to assessing the conduct of licensees for the purposes of sections 133 and 139 of the CMA:

(a) section 133 prohibits a licensee from engaging in conduct which has the purpose of substantially lessening competition in a communications market; and

(b) section 139 gives the MCMC the power to direct a licensee in a dominant position to cease conduct which has, or may have, the effect of substantially lessening competition.

9.4 The revised draft SLC Guideline sets out the MCMC's interpretation of the substantial lessening of competition test and the factors that may be taken into account by the MCMC when making a decision to bring enforcement action in relation to breaches of section 133 or to make a direction in accordance with section 139(1) of the CMA. The draft SLC Guideline also outlines the MCMC's investigation and decision making process.

Analytical framework for assessing a 'substantial lessening of competition' as set out in the SLC Guideline

'Purpose and effect'

9.5 The MCMC's approach to assessing a licensee's conduct will differ depending on whether the MCMC is assessing the conduct under section 133 or section 139 of the CMA.

9.6 Section 133 prohibits a licensee from engaging in conduct which has the *purpose* of substantially lessening competition in a communications market. Accordingly, section 133 requires an assessment of the 'purpose' of the conduct in question.

9.7 By contrast, section 139 gives the MCMC the power to direct a licensee in a dominant position to cease conduct which has, or may have, the *effect* of substantially lessening competition.

9.8 In assessing the 'purpose' of a licensee's conduct, the MCMC will have regard to direct evidence of purpose or it may infer a purpose from a range of factors, including:

(a) the nature of the conduct;

(b) the circumstances of the conduct, including the decision making process that led up to the conduct and its commercial context; and

(c) the actual or likely effect of the conduct.

9.9 It is possible for conduct to have more than one purpose. The MCMC will consider a licensee to have engaged in conduct with a particular purpose if that purpose is or was a substantial purpose of the conduct. This means that the particular purpose should be one of the purposes of the conduct and have been material to the decision to engage in the conduct in question.

9.10 The 'effect' of conduct is the result or outcome of that conduct. In assessing the 'effect' of a licensee's conduct, the MCMC will examine the results of the conduct or the likely results of the conduct.

What is 'substantially lessening competition'?

9.11 In a competitive market, firms are constrained in their commercial activities by the presence of existing or potential competitors, or by their customers. Therefore, a 'lessening' of competition in a market involves a reduction of the competitive constraints in that market.

9.12 Making a determination on whether competition is lessened by particular conduct is a question of fact and a matter of degree. A 'lessening' of competition may be equated with an increase in market power for one or more participants in a market. For example, a lessening of competition will usually occur if the number of competitors in the market is reduced. A 'lessening' of competition can also occur if a firm engages in conduct which maintains its market power. For example, conduct that prevents market entry or creates a barrier to entry may also equate to a lessening of competition.

9.13 Not all conduct that lessens competition is prohibited by the CMA. It is only when that conduct substantially lessens competition in a communications market that the MCMC will take action. The MCMC takes the view that a lessening of competition will be 'substantial' if the reduction in competitive constraints in the communications market (or the resulting increase in market power) is considerable or big.[3]

9.14 For instance, conduct that results in a reduction of (or has the purpose of reducing) the number of suppliers in a market does not, of itself, constitute a substantial lessening of competition. Whether conduct which results in a reduction in the number of suppliers in a communications market has the purpose or effect of substantially lessening competition will depend on whether and to what extent that reduction results in a reduction or weakening of the competitive constraints on the remaining suppliers in the communications market or reduces the incentives for the remaining suppliers to compete. For example, conduct which attempts to eliminate a

[3] *Radio 2UE Sydney Pty Ltd v Stereo FM Pty Ltd (1982)* 62; FLR 437; 2 TPR 315; 44 ALR 557; ATPR 40-318 at [444].

minor market participant might only have a trivial effect on competition, but conduct which attempts to reduce competition from a major participant could have a dramatic effect on competition in the market.

The 'with and without' test and competitive factors

9.15 The MCMC will use the 'with or without' test (also known as the counterfactual test) when assessing whether conduct has the purpose or has, or may have, the effect of substantially lessening competition in a communications market. The test considers:

(a) what competition in the market would look like with the conduct taking place; and

(b) what competition in the market would look like without the conduct taking place.

9.16 If the level of competition in the market with the conduct is substantially lower than the level of competition in the market without the conduct, the conduct will be considered by the MCMC to 'substantially lessen competition' in the market.

9.17 Assessing the 'level of competition' in a market in the future with the conduct against the future without the conduct involves an assessment of the following factors:

(a) the structure of and nature of existing competition in the market;

(b) potential competition, including barriers to entry or expansion and the height of those barriers; and

(c) other sources of competitive constraint, including the existence or strength of countervailing power of buyers.

9.18 When assessing the level of competition in the market 'with' the conduct, the MCMC will usually apply the prevailing conditions of competition or, in other words, the 'status quo'. However, the MCMC may use a counterfactual different from the prevailing conditions of competition where there is compelling evidence that the status quo will not continue regardless of the conduct (e.g. evidence of an independent exit from the market by a major competitor).

Examples of conduct that may 'substantially lessen competition'

9.19 The MCMC will closely monitor communications markets for conduct that has, or may have, an adverse effect on competition. While there is a broad range of conduct that may achieve such a result, there are some particular types of conduct that are more likely to concern the MCMC.

9.20 Examples of conduct that the MCMC considers to be more likely to have an adverse impact on competition in a communications market include:

(a) Predatory pricing. This refers to a pricing strategy of setting low prices (sometimes below cost) to eliminate a competitor or to deter a potential competitor from entering the market.

(b) Refusal to supply. This refers to an actual refusal to supply products or services, such as in response to a request from an actual or potential competitor, or a constructive refusal to supply a product or service, such as agreeing to supply but only on uncompetitive or uncommercial terms or conditions.

(c) Margin squeeze. This refers to a situation where a vertically integrated firm that controls an essential input to the downstream market supplies that input at a price that makes it difficult or impossible for its competitors in the downstream market to compete because the firm does not charge its own downstream operation the same high price.

(d) Bundling. This concept refers to the practice of supplying a product or service only on the condition that the consumer also acquire or not acquire a different product or service from that supplier or from another supplier.

(e) Other foreclosure strategies. There are a number of strategies that may be employed by a licensee to foreclose, limit or deter competition in a market. These strategies may include exclusive dealing or a situation where a vertically integrated firm that controls an essential input to the downstream market supplies that input on non-price terms and conditions that make it difficult or impossible for its competitors in the downstream market to compete.

(f) Mergers or acquisitions. A 'merger' refers to the combining of two or more firms. An acquisition refers to the acquisition of assets or shares.

9.21 Engaging in the above types of conduct will not necessarily result in a 'substantial lessening of competition' per se. However, these forms of conduct are more likely to be of concern to the MCMC and result in an investigation if the MCMC has grounds to believe that such conduct has the requisite purpose or effect.

9.22 Section 135 ('Prohibition on entering into collusive agreements') and section 136 ('Prohibition on tying or linking arrangements') of the CMA prohibit specific types of conduct. These provisions operate in addition to the operation of sections 133 and 139. In many cases there may be overlap between these provisions and, where this occurs, the MCMC may choose to take action under either the specific prohibitions in sections 135 and 136 (as applicable), or to apply the more general provisions under sections 133 and 139 (as applicable).

Authorisations

9.23 The MCMC may authorise conduct under section 140 of the CMA which may have the purpose or the effect of substantially lessening competition in a communications market, if it is satisfied that the conduct is in the national interest.

9.24 This would usually require the MCMC to be satisfied that the national interest in the conduct outweighs the detriment to competition caused by that conduct.

Summary of submissions on SLC Guideline

9.25 The MCMC received comments from a number of licensees on the draft SLC Guideline. A high level summary of key or recurring comments is provided below, grouped by subject matter.

General approach to SLC Guideline

9.26 One licensee noted that much of the revised SLC Guideline is based loosely on the current Guideline on Substantially Lessening Competition 2000. The licensee requested that the MCMC provide a separate section in the draft SLC Guideline to describe material/significant changes and the thinking behind such amendments.

Clarification on the investigative process

9.27 One licensee notes that the guidelines indicate that the MCMC may commence an investigation if it has grounds to believe that a licensee has engaged in anti-competitive conduct (e.g. a complaint is made; information from the media or public reports, etc.). The licensee would like to clarify whether MCMC takes active measures to constantly assess the state of competition in the market. The licensee claims that anti-competitive conduct continue to take place (e.g. state-backed companies often abuse their position of power) and the MCMC should regularly assess the market and take steps where necessary.

9.28 The licensee notes that the SLC Guideline currently states that the MCMC is "not required to undertake a public inquiry."[4] This infers that the process described makes reference to a situation where MCMC is investigating conduct suspected of having the effect of lessening of competition, and where the remedy involves invoking section 139 of the CMA. The licensee would like to clarify whether the process will be the same where the MCMC conducts an investigation on the purpose of conduct under section 133 of the CMA.

9.29 A mobile provider notes that there are exceptions in paragraph 2.2 of the SLC Guideline where MCMC may deviate from the market definitions set out in the Market Definition Analysis. The provider agrees that there may be circumstances where this could be necessary. However, in such

[4] See: paragraph 6.4(d) of SLC Guideline.

circumstances, due consultation and transparency for the deviation should be applied in accordance with the processes set out in the CMA.

'Purpose' and 'effect' of substantially lessening competition

9.30 A licensee requested clarification on the 'purpose' and 'effect' criteria. Based on the licensee's interpretation, it would seem that:

(a) the 'purpose' criteria is applied to licensees in general under section 133, regardless of whether the licensee is in dominant position; and

(b) the 'effect' criteria is more specifically applied to licensees who are in a dominant position as provided for in section 139.

9.31 The licensee agrees that a licensee in a dominant position, if engaged in a conduct deemed to have the effect of substantially lessening of competition, should be tested against the 'effect' criteria. However, the licensee suggests applying the use of the 'purpose' criteria more cautiously.

Clarification on what is considered a substantial lessening of competition

9.32 In the SLC Guideline, the MCMC states that a "lessening of competition will be 'substantial' if the reduction in competitive constraints in the communications market (or the resulting increase in market power) is considerable or big".[5] A licensee requests further clarification on the meaning of 'considerable' or 'big'.

9.33 One licensee notes that the following factors should be considered when assessing whether conduct is likely to substantially lessen competition under section 133 of the CMA:

(a) the actual and potential level of import competition in the market;

(b) the height of barriers to entry to the market;

(c) the level of concentration in the market;

(d) the degree of countervailing power in the market;

(e) the likelihood that the acquisition would result in the operator being able to significantly and sustainably increase prices or profit margins;

(f) the extent to which substitutes are available in the market or are likely to be available in the market;

(g) the dynamic characteristics of the market, including growth, innovation and product differentiation;

(h) the likelihood that the acquisition would result in the removal from the market of a vigorous and effective competitor; and

[5] SLC Guideline at paragraph 3.5.

(i) the nature and extent of vertical integration in the market.

Mergers and acquisitions

9.34 A prominent mobile operator requested clarification on the MCMC's proposed inclusion of mergers and acquisitions as an example of conduct that may 'substantially lessen competition'. These activities are often motivated by positive factors that aim to improve productivity (e.g. synergies, economies of scale, etc.) and are not necessarily done to have an anti-competitive effect on the market.

9.35 Further, the operator also notes that provisions are already in place in the CMA to provide protection for small operators against anti-competitive practices of larger dominant operators.

9.36 Another licensee also submit that the MCMC's proposed regulation of mergers and acquisitions in the SLC Guideline is inappropriate and misplaced, as the MCMC only has limited power to review the merger itself and insufficient guidelines have been provided on this matter. The licensee claims that, as currently drafted, the SLC Guideline provides the MCMC with too much discretion.

Other examples of conduct that may 'substantially lessen competition'

9.37 A licensee supports the new examples of conduct provided in the SLC Guideline which it claims provide greater clarity to licensees.

9.38 The licensee also requests that the MCMC make an allowance for conduct that may otherwise substantially lessen competition to be objectively justified, especially in relation to content exclusivity and bundling. The provider notes that the SLC Guideline does not make any express exception or allowance for conduct that may otherwise substantially lessen competition to be justified (legitimately) on the basis, for example, that the conduct represents a reasonable commercial response or brings about benefits.

9.39 A mobile operator notes that the SLC Guideline describes 'bundling' as generally referring to the situation where two or more products or services are sold as a single package. However, the operator considers that 'bundling' should refer to 'commercially distinct' products and services offered by telecommunication operators as a bundle and excludes products generally offered within a particular type of plan (e.g. a plan containing voice, data and SMS services).

9.40 A licensee submits that, in assessing predatory pricing conduct, the MCMC should take into consideration various cost standards, such as long term average incremental cost.

9.41 A licensee notes that in some cases exclusive dealing may be a legitimate commercial strategy. For example, in relation to content acquisition where a content provider seeks to attract subscribers and increase revenues, the

acquisition of exclusive rights can allow the licensee to guarantee that the investments it undertakes will generate proper returns.

Authorisation of conduct under section 140 of the CMA

9.42 A licensee requests that the MCMC provide more clarity on the process for licensees to seek authorisation for conduct, which might otherwise be deemed to substantially lessen competition, on the grounds of national interest.

9.43 The licensee submits that the SLC Guideline does not set out critical basic information about the process for seeking authorisation (including whether or not it will be subjected to public/industry consultation, whether such an application should only follow after the MCMC's finding of "substantially lessening of competition" and the expected timeline for the MCMC's decision-making) or the factors that the MCMC will take into account when considering authorisations.

MCMC response to comments on SLC Guideline

9.44 The MCMC has considered the submissions that were received from selected licensees during the informal consultation process.

9.45 The MCMC offers the following responses to some of the key issues that were raised by licensees during the informal consultation process:

(a) The MCMC notes that a licensee has sought clarification on whether the MCMC will actively assess the state of competition in communication markets. As discussed in the previous section, the MCMC recognises that markets are highly dynamic and are continually evolving. Therefore, the MCMC recognises the importance of continually re-assessing the state of competition in communication markets and taking action if necessary. The MCMC will also evaluate any competition complaints that it receives from licensees to assess whether further action is required. However, the MCMC notes that there is no formal process under the CMA that the MCMC is required to follow before issuing a direction under section 139. The SLC Guidelines seek to provide clarity around that process for the benefit of licensees and potential complainants.

(b) Similarly, other licensees have also requested clarification on the consultation requirements that will be followed when applying the SLC Guideline (e.g. investigations, authorisation requests, etc.). The MCMC notes that it will comply with Chapter 3 of Part V of the CMA when applying the SLC Guideline. These provisions require the MCMC to conduct a public inquiry in response to a Ministerial direction or otherwise "as and when the [MCMC] thinks fit"[6] if it is satisfied that a matter is "*of significant public interest to either the*

[6] Section 60(1), CMA.

public or to current or prospective licensees."[7] Thus, in the context of the SLC Guideline, the MCMC notes that it may conduct a public inquiry where it is satisfied that doing so would comply with the threshold set out in section 58(2) of the CMA. The MCMC also notes that section 58(2)(a) provides that a person may submit a written request for the MCMC to hold a public inquiry in relation to a particular issue. This approach will apply for any action that is contemplated under sections 133 and 139 of the CMA.

(c) A licensee has requested clarification on the meaning of 'considerable' or 'big' at paragraph 3.5 of the SLC Guideline. The MCMC notes that these terms come from Australian case law. These words should be interpreted based on their natural and ordinary meaning. An example is also provided in paragraph 3.6 of SLC Guideline to further clarify what will be viewed as 'substantial'.

(d) Several licensees questioned the inclusion of mergers and acquisitions in the SLC Guideline and pointed out that that it is inappropriate for MCMC to do so. MCMC believes that 'conduct' could encompass any commercial or other activities that are undertaken by a licensee in the relevant market. This could include a licensee entering into a contract with another party, setting its prices and marketing its products. Accordingly, the term 'conduct' under sections 133 and 139 can be read as encompassing mergers and acquisitions undertaken by a licensee.

(e) Several licensees have requested the inclusion of a requirement in the SLC Guideline for the MCMC to consider the potential positive benefits of otherwise anti-competitive conduct (e.g. in relation to a proposed merger and acquisition). The MCMC does not consider this to be a valid consideration when assessing conduct section 133 and 139 of the CMA. Instead, the MCMC notes that any positive or legitimate purpose or effect of conduct which is likely to substantially lessen competition will be considered when assessing an authorisation application under section 140.

(f) Based on this interpretation, the MCMC would also like to make it clear that a licensee that engages in conduct which has, or may have, the purpose or effect of substantially lessening competition in a communications market may be in breach of section 133 or 139, as applicable. Licensees will be expected to lodge an application for authorisation with the MCMC under section 140 before engaging in such conduct.

(g) The MCMC will issue a separate guideline to clarify the process for licensees to seek authorisation for conduct which may have the purpose or the effect of substantially lessening competition in a communications market.

[7] Section 58(2), CMA.

9.46 The SLC Guideline is available in a draft form on the MCMC website. A minor amendment has been made to the draft SLC Guideline to remove references to "tying" as an example of SLC conduct, which is expressly prohibited under section 136 of the CMA. The MCMC welcomes further submissions on the SLC Guideline as part of the consultation process.

Question A2

The MCMC is seeking views on the following:

(a) Do you have any further comments on the SLC Guideline?

Part B Dominance analysis

1 Fixed telephony services (including VoIP)

Market overview

1.1 The public switched telephone network (**PSTN**) is the traditional mode of communications for fixed telephony services in Malaysia. As at the end of 2013, there were 2,247,000 fixed household subscriptions in Malaysia, at a penetration rate of 32.4%. There were also 1,499,000 non-household fixed subscriptions.[8]

1.2 The Direct Exchange Line (**DEL**) penetration rate varies across Malaysia, although urban DEL penetration (at 76.7 DELs per 100 households) far outstrips rural DEL penetration (at 23.3 DELs per 100 households) as at the end of 2012. As of 2013, the highest concentration of DEL penetration is in Penang followed by Malacca at 50 and 46.9 DELs per 100 households respectively. The lowest levels of DEL penetration as at 2013 exist in Kuala Lumpur (15.2%) and Kelantan (16.5%).[9]

1.3 DEL penetration rates have been falling in all states of Malaysia over the past few years.

1.4 Telekom Malaysia is the largest provider of DELs and fixed telephony services in Malaysia. In 2013, Telekom Malaysia reported having total of 3,746,000 voice subscribers [10] Total revenue for voice services for that year was reported at RM3,617,700,000 .[11]

1.5 Maxis and TT dotCom also provide DELs and fixed telephony services in Malaysia. Maxis did not provide the MCMC with its fixed voice subscriber numbers, but it did report a total revenue of RM311,231,000 for its Enterprise Fixed Services (retail and wholesale) and its fixed Home Service (retail only) in 2013.[12] TT dotCom did not provide the MCMC with its subscriber numbers and revenue figures for its fixed voice telephony services. However, TT dotCom estimated that its market share was less than 5% for the wholesale voice market.[13]

1.6 Telephony calling services are provided by the DEL providers described above, as well as licensed VOIP providers such as Packet One. OTT service providers also offer telephony services over fixed broadband connections.

1.7 The fixed telephony service (including VoIP) is provided at retail and wholesale levels, to be distinguished from other fixed telephony wholesale services (e.g. call origination or ULL) discussed elsewhere in this Public Inquiry.

[8] MCMC, *Communications and Multimedia Pocket Book of Statistics Q4 2013* at page 24.
[9] MCMC, *Communications and Multimedia Pocket Book of Statistics Q4 2013* at page 25-26.
[10] MCMC, *Communications and Multimedia Pocket Book of Statistics Q4 2013* at page 24.
[11] Telekom Malaysia Annual Report 2013
[12] Maxis Annual Report 2013.
[13] TT dotCom Questionnaire Response at 1.10.

1.8 The MCMC currently views mobile services and fixed telephony services as forming separate communications markets. However, it is still necessary to consider the competitive constraints that mobile services place on fixed telephony services when making an assessment of dominance.

Summary of submissions on market definition

Residential and business market segments

1.9 A prominent fixed services operator considers that the fixed telephony market should not be separated according to market segmentation (i.e. separate residential and business product markets). The operator notes that both residential and business telephony services use the same network elements and have the same capability to provide access to all types of calls, despite differences in scale of operation and requirements for higher functionality (e.g. quality of service). The operator also notes that it does not offer fixed telephony as a service to other licensees, but instead offers a Wholesale Line Rental service to enable the provision of telephony services to end user customers.

1.10 On the other hand, several licensees support the MCMC's proposed separation of fixed residential and business telephony services. These licensees note that separate markets are required to account for differences in the nature of the services and the pricing structures. For example, one prominent mobile provider notes that the usage, and resulting revenue, of business users are typically much higher and call patterns are also different (e.g. peak/off peak usage).

Mobile and VoIP telephony services

1.11 A prominent fixed services operator promotes the inclusion of fixed, mobile and VoIP telephony services in a single market. The operator makes several claims to support this position, such as:

(a) the declines in DEL penetration and revenue for fixed services is largely attributable to mobile and VoIP substitutes;

(b) in transition economies where the fixed market is less mature (e.g. Malaysia) the introduction of mobile services has seen a large portion of the population bypass the acquisition of a fixed-line service altogether;

(c) the shift from fixed to mobile telephony services is likely to continue for a number of reasons (e.g. greater functionality such as text and data, emerging technologies such as LTE, convenience of mobility, etc.); and

(d) most mobile operators are likely to launch VoLTE services which should lead to further substitution away from fixed to mobile services.

1.12 The operator also notes that VoIP services are lowering costs and enabling new and innovative services, which is leading to substitution away from voice telephony services provided over the PSTN. The quality of VoIP services is likely to improve in the future with the imminent rollout of VoLTE technologies.

1.13 On the other hand, several licensees supported the MCMC decision to maintain separate fixed and mobile telephony markets. Several licensees also noted that there is currently limited substitutability between fixed telephony and certain VoIP services. For example, a prominent mobile provider notes that broadband network availability is limited and VoIP services are really only available via higher speed broadband networks where high quality of service is possible.

MCMC findings on market definition

Residential and business market segments

1.14 The MCMC notes that most licensees appear to support separate markets for fixed residential and business telephony services. In addition to the factors raised in the Market Definition Analysis,[14] licensees also noted that usage patterns (and resultant revenues) tend to be different for residential and business users.

1.15 The MCMC accepts that both residential and business telephony services use the same network elements and have the same capability to provide access to all call types. However, the MCMC considers that the differences in scale, pricing and functionality (e.g. quality of service) justify the definition of separate business and residential fixed telephony markets.

Mobile and VoIP telephony services

1.16 The substitutability of fixed and mobile telephony services appears to be a contentious issue with licensees.

1.17 The MCMC notes that a prominent fixed telephony provider provided evidence to suggest that substitution was taking place between fixed and mobile services (e.g. declines in DEL penetration and revenue compared to a growth in mobile telephony revenues). Although such information may suggest that a correlation is likely to exist between declines in DELs and growth in mobile telephony services, it is important to note that these statistics do not prove that a causal relationship exists and that a finding of substitution could be made in respect of the two technologies.

1.18 Further, while the MCMC acknowledges that some substitution between fixed and mobile telephony services may be taking place, the MCMC notes that there remain key differences between the two technologies, including:

(a) mobile telephony permits users to make or receive calls while on the move and in different locations, which is a fundamental

[14] See: discussion on 'Business and residential service substitution' under section 2 of Part B of Market Definition Analysis.

deviation from fixed-line services that are only available at a particular location; and

(b) there are significant differences in the pricing strategies that are adopted by fixed and mobile providers (e.g. pricing structures for "on-net" and "off-net" calls, higher charges for fixed-line calls, a 'bucket' of free calls for mobile providers, etc.).

1.19 For these reasons, the MCMC continues to be of the view that mobile services do not constitute an effective substitute for fixed-line telephony services at this time. This position is also in line with the latest EC approach[15] and is supported by several licensees in their submissions on the Market Definition Analysis.

1.20 The MCMC is also of the view that 'unmanaged' VoIP services are not substitutes for the fixed line calling markets set out above. The MCMC notes that this position was supported by a prominent mobile operator, who pointed out that VoIP services are really only available via higher speed broadband networks where network coverage is available and high quality of service is possible.

MCMC findings on market for fixed telephony services

1.21 In summary, the MCMC maintains its view that there are separate national retail and wholesale markets for access to fixed telephony services, which is separated into business and residential markets. The separate product markets are:

(a) access to the fixed line connection and local calling services; and

(b) separate calling markets (including PSTN and VoIP) for:

(i) national long distance calls;

(ii) international calls; and

(iii) fixed-to-mobile calls.

Assessment of dominance

1.22 The following dominance assessment applies generally across all product markets and functional levels of the fixed telephony markets. Where unique or more specific points of assessment apply to a particular market segment (e.g. residential/business, wholesale/retail, etc.), these are expressly noted in the analysis.

Market structure and the nature of competition

1.23 In the 2004 Dominance Study, the MCMC found that Telekom Malaysia was not subject to effective competition in the fixed-line voice telephony market. The MCMC concluded that, while there may be a degree of

[15] See: Ecorys, *Future electronic communications markets subject to ex ante regulation: final report* (18 September 2013) at page 87.

competition in some areas of Malaysia, this ultimately did not appear to undermine Telekom Malaysia's strong position across most of the country.

1.24 Despite some advancements that have been made by rival networks in recent years, investment by rivals in fixed network infrastructure has generally been quite limited, and as a result in most regions Telekom Malaysia retains its historical position and is unlikely to face effective competition in the fixed telephony market. As the national incumbent, Telekom Malaysia also continues to have the most comprehensive access network, the strongest brand name, and the widest portfolio of services.

Market share

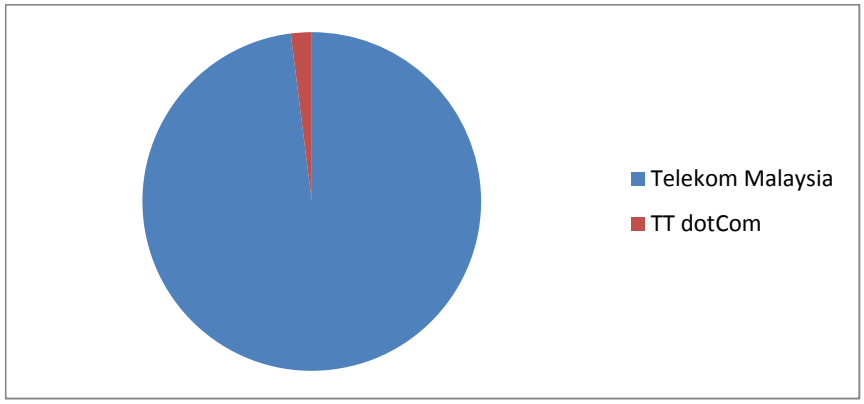
1.25 This lack of investment by rivals also results in Telekom Malaysia's continued substantial share of the fixed telephony market. Multiple service providers (both within and outside of the fixed telephony market) have claimed that Telekom Malaysia currently holds "more than 90% market share"[16] in the retail and wholesale fixed-line markets (generally). One service provider estimated that Telekom Malaysia had as much as 98% market share for fixed telephony services specifically.[17]

1.26 The remainder of the market appears to be split between various operators with each operator having less than 5% market share. For example, TT dotCom's market share at the retail level was approximately 3% and at the wholesale level it was approximately 4% in 2013.[18]

1.27 Based on the MCMC's own calculation of market share using public available revenue data for 2013,[19] the MCMC estimates that Telekom Malaysia has approximately 98% and TT dotCom has approximately 2% market share in the fixed voice telephony market.

[16] For example, see: Maxis Questionnaire Response at 2.1 and U Mobile Questionnaire Response at page 14.
[17] Celcom Questionnaire Response at Appendix 6.
[18] TT dotCom Questionnaire Response at 1.10.
[19] See: Telekom Malaysia Annual Report 2013 and TT dotCom Annual Report 2013.

Figure 2: MCMC estimate of market share for fixed telephony market in Malaysia



1.28 The MCMC notes that Maxis reports its revenue for 'home fibre internet' services in its 2012 annual report, but does not separate out its fixed voice telephony revenue so a market share has not been calculated for Maxis. However, the MCMC considers it likely that Maxis is likely to have a similar market share (or less) than TT dotCom.

1.29 A high market share does not necessarily equate with dominance. However, with all major competitors of Telekom Malaysia identifying such high levels of market share for the incumbent operator and the MCMC's own calculation indicating the same, the MCMC is inclined to view Telekom Malaysia's significant market share as a strong indicator of its dominant position in the fixed telephony market.

1.30 The MCMC notes that Telekom Malaysia has identified a broader telephony market for both fixed and mobile services, which would significantly dilute its market share across the combined telephony market.[20] However, for the reasons outlined in the Market Definition Analysis,[21] the MCMC views fixed and mobile telephony services as forming separate markets.

National fixed network coverage and wholesale access

1.31 Telekom Malaysia's fixed-line network footprint covers most of Malaysia. In contrast, the incumbent's main competitors in the fixed telephony market have restricted investment to and only extended their respective networks to the more densely populated areas of the country. For example, TT dotcom and Maxis report that their respective fixed-line networks primarily serve only the three major market centres of Klang Valley (including Kuala Lumpur), Johor Bharu and Penang.[22]

[20] For example, Telekom Malaysia claims that its market share in the combined retail market for fixed and mobile voice telephony services is approximately 18% (Telekom Malaysia Questionnaire Response – General at 2.12).
[21] See discussion on 'Mobile telephony as a possible substitute for fixed telephony' under section 2 of Part B of Market Definition Analysis.
[22] TT dotCom Questionnaire Response at 1.2(d)(ii) and Maxis Questionnaire Response at 1.3(a).

1.32 Outside of these areas, operators tend to acquire wholesale access from other licensees (typically Telekom Malaysia) in order to reach end users in regions where they do not have their own fixed-line network. TT dotCom noted that its lack of coverage in the 'last mile' in smaller cities outside of the major business centres was a growing concern, particularly where it hindered the service provider's ability to service its core business and government customers. In these instances, TT dotCom claimed that Telekom Malaysia was typically the only operator able to provide services in these areas.[23]

1.33 In effect, reliance on the incumbent's network enhances Telekom Malaysia significant market power outside of the major population centres (e.g. Sabah) as its main competitors are required to rely on its price and terms of access.

Determination of pricing

1.34 A fixed services provider claims that Telekom Malaysia is a price leader in the fixed wholesale voice market. The reasons given to support this view are that Telekom Malaysia has the largest fixed-line network and its high traffic volumes have enabled it to control the market and maintain its position of dominance.[24] However, the MCMC notes that fixed network origination and termination services are currently regulated under the Mandatory Standard on Access Pricing Determination No. 1 of 2012, which limit a provider's ability to dictate wholesale pricing for voice services in the fixed telephony market.

1.35 Similarly, another wholesale provider claims that its voice termination minutes have been declining year on year due to the significant discounts that were being provided by Telekom Malaysia (close or lower than interconnect) to its enterprise customers.[25] However, the MCMC notes that Telekom Malaysia's own revenue for its wholesale regulated voice interconnect minutes and commercial PSTN minutes have also been declining,[26] so this downward trend across the market may be attributable to other factors (e.g. growing use of mobile telephony and OTT services or non-price issues such as delivery and installation timeframes offered to competitors and their customers).

1.36 At the retail level, the MCMC notes that the *Communications and Multimedia (Rates) Rules 2002* (**Rate Rules**) provide ceilings for call rates and rental charges, and specific charges for connections and reconnections. However, price regulation is not in itself likely to be a complete tool for addressing the range of potential anti-competitive conducts that may occur, particularly those aimed at preventing or restricting the emergence of effective competition. For example, while the Rate Rules may prevent

[23] TT dotCom Questionnaire Response at 1.8.
[24] TT dotCom Questionnaire Response at 2.1(e).
[25] Maxis Questionnaire Response at 1.8.
[26] Telekom Malaysia Questionnaire Response at 11.1(a))

excess pricing, they are unable to constrain other forms of anti-competitive behaviour (e.g. predatory pricing).

1.37 The access seekers have also noted that operators will almost always default to the ceiling price in locations where there are no other competitive service providers.[27]

Switching costs

1.38 The MCMC is of the preliminary view that Telekom Malaysia's existing customers are likely to face significant switching costs which may discourage them from changing providers. As the incumbent operator, Telekom Malaysia inherited a pool of customers that may be reluctant to switch operators even in areas where other options may now be available. This could be due to factors such as the costs and disruption of changing telephone numbers (e.g. transitional service disruptions, inconvenience of notifying contacts of number change, etc.), as well as general transaction costs like changing payment arrangements. These costs will often dissuade a customer from switching providers, even where there is deterioration in Telekom Malaysia's service.

Business and residential telephony services

1.39 As noted in the Market Definition Analysis,[28] business customers tend to demand fixed line telephony services that are capable of offering a higher degree of functionality (e.g. through PBX-based services) and quality of service. Thus, competition for larger corporate or government customers in the fixed telephony market will often depend on each provider's ability to effectively compete on these basic service characteristics.

1.40 As discussed above, Telekom Malaysia has the largest fixed network in Malaysia which tends to give the incumbent operator an advantage over its competitors in regional and other less densely populated areas. One rival operator attributed its lack of coverage in the 'last mile' in smaller urban centres outside of the major business districts as a growing impediment to the operator's ability to service its larger corporate and government customers. The operator noted that Telekom Malaysia was often the only operator that was able to provide business-grade telephony services in these areas.

1.41 Similarly, the operator also noted that in several areas Telekom Malaysia has exclusivity arrangements which prevented competitors from laying the infrastructure necessary to reach business and government clients. If Telekom Malaysia has entered into a long term exclusivity agreement with Putrajaya Corporation as alleged by the operator, Telekom Malaysia is likely to enhance its position in both the residential and fixed telephony markets.

[27] For example, see TT dotCom Questionnaire Response at 1.7(iii).
[28] See: discussion on 'Business and residential service substitution' under section 2 of Part B of Market Definition Analysis.

1.42 For the above reasons, the MCMC is of the preliminary view that in most geographic regions Telekom Malaysia should be viewed as a dominant provider of all forms of fixed line telephony services. In those areas where alternative service providers offer competitive services, it is likely that Telekom Malaysia will still retain a very strong position with respect to its existing customers due to its previous position as the national incumbent, its extensive backbone network and the lack of significant investment by rivals sometimes attributable to exclusive agreements with developers or government authorities, as described above.

1.43 The MCMC also notes that switching costs and high barriers to entry (discussed below) in the market for fixed-line telephony services are likely to prevent any real erosion of Telekom Malaysia's substantial market share from taking place in the near future.

Barriers to entry or expansion

1.44 The fixed telephony market tends to be characterised by relatively high barriers to entry or expansion for a number of reasons. These include:

(a) Infrastructure costs. Entry or expansion in the fixed telephony market requires the erection of facilities that are capable of supporting transmission services. Investing in these types of infrastructure-based assets typically involves large sunk costs which makes new entry into the market risky as a consequence. This view has support from the European Commission, which found that the capital investment required to build a communications network reaching a significant proportion of the population is extremely inhibitive and acts as a barrier to entry for new participants.[29] This position was also noted by several service providers.[30] The MCMC also notes that there has generally been a low level of investment in fixed infrastructure by alternative providers.

(b) Contractual restrictions. The existence of long term supply contracts in a market can constitute a barrier to entry if it prevents or restricts potential entrants from accessing key inputs or customers. For example, one service provider cited exclusivity agreements for the installation of network facilities between licensees and local authorities or developers as a potential barrier to entry or expansion in certain regions.[31] Similarly, preferential terms of supply enjoyed by the incumbent may also constitute a barrier to entry or expansion.

(c) Access to facilities and inputs. The communications sector is dependent on access to key facilities and other infrastructure. The potential difficulties associated with accessing these inputs may deter new entrants or existing participants from expanding their

[29] COMP/C-1/37.451, 37.578, 37.579 — *Deutsche Telekom AG* (21 May 2003) at para 101 available online at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:263:0009:0041:EN:PDF>
[30] For example, see: TT dotCom Questionnaire Response at 2.2(d).
[31] TT dotCom questionnaire at 3.1(a).

operations. One particular issue that appears to be a problem for current service providers in Malaysia is the inability to access end users in certain regions. For example, one service provider gave the example of Telekom Malaysia teaming up with Putrajaya Corporation to prevent other licensees from laying basic infrastructure (e.g. ducts, poles, copper cables, etc.) within the area of Putrajaya.[32] These types of arrangements can be a detriment to competition and are likely to discourage potential competitors from entering the market.

(d) Regulatory and legal requirements. Telekom Malaysia identified the more onerous regulatory and reporting obligations that are placed on the fixed telephony industry as a key reason why operators now prefer to invest in mobile services and facilities.[33] Telekom Malaysia also noted that varying regulatory requirements between the different levels of government and across states often made compliance onerous and costly.[34]

(e) Economies of scale and scope. The economics of communications networks are characterised by economies of scale and density externalities, which put larger players at an advantage relative to smaller operators. Given the size of Telekom Malaysia's fixed-line network compared to its competitors, Telekom Malaysia is likely to benefit from lower average transmission costs when transmitting a call across its network. These cost advantages may serve as a significant barrier to expansion or entry for other service providers who are unable to effectively compete against the margins achieved by the incumbent operator.

1.45 The MCMC considers that these barriers to entry and expansion set out above continue to insulate Telekom Malaysia's dominant position in the fixed telephony services market. For these reasons, it is likely that existing competitors will continue to be limited in their ability or desire to invest and hence erode Telekom Malaysia's market share and potential new entrants will be dissuaded from investing in a market with such high barriers to entry.

Preliminary finding on dominance

1.46 The MCMC's preliminary view is that Telekom Malaysia is dominant in the national retail and wholesale markets for access to fixed telephony services, which is separated into business and residential markets and includes the following separate product markets:

(a) access to the fixed line connection and local calling services; and

(b) separate calling markets (including PSTN and VoIP) for:

[32] TT dotCom Questionnaire Response at 3.3.
[33] Telekom Malaysia Questionnaire Response at 2.13(e).
[34] Telekom Malaysia Questionnaire Response at 2.13(e).

(i) national long distance calls;

(ii) international calls; and

(iii) fixed-to-mobile calls.

Question 1

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you agree with the preliminary market share findings?
(c) Have the Rate Rules been effective in promoting competition at the retail level for fixed telephony services?
(d) Are there any additional competition issues that the MCMC should consider before making its final determination on dominance?
(e) Do you agree or disagree with the MCMC's preliminary finding on dominance?

2 Fixed broadband and data

Market overview

2.1 Broadband services are provided by a number of means in Malaysia. At the end of 2013, there were 1,962,500 fixed (wired) broadband household connections in Malaysia. There were 411,900 fixed (wired) broadband non-household connections. Fixed wired broadband connections were provided by way of ADSL, SDSL, VDSL, fibre, satellite and fixed wireless.[35]

2.2 The fixed (wired) broadband household penetration rate is 67.1% as of 2013 across Malaysia. The highest concentration of fixed (wired) broadband penetration tends to be in highly urbanised areas, namely Kuala Lumpur (111.7%) and Putrajaya (81.9%). The lowest levels of fixed (wired) broadband penetration exist in Kelantan (41.9%) and Perak (51.7%).[36]

2.3 The main providers of fixed (wired) broadband services are Telekom Malaysia, Maxis and TT dotCom.

2.4 Telekom Malaysia is also building a high speed broadband network (**HSBB**). As at February 2014, the MCMC reported that Telekom Malaysia had rolled out its HSBB network to 103 HSBB exchanges and that 1,496,214 ports had been installed.[37]

2.5 Low speed data connections also continue to be provided in Malaysia including by way of internet dial-up connections. For example, Telekom

[35] MCMC, *Q4 2013 Communications & Multimedia Pocket Book of Statistics*.
[36] MCMC, *Q4 2013 Communications & Multimedia Pocket Book of Statistics*.
[37] Telekom Malaysia, Report to MCMC.

Malaysia continues to offer dial-up Internet services over its PSTN which can reach speeds of up to 56.6 kbps.[38]

2.6 The MCMC separately considers managed data services in section 8 below.

Summary of submissions on market definition

Residential and business product markets

2.7 A prominent fixed services provider disagrees with the MCMC's proposal to split the fixed broadband market into 'business' and 'residential' markets. Where competition is concerned, the provider thinks that the focus should be on service provision, rather than whether or not there are any issues related to getting access to allow licensees to provide that service.

2.8 On the other hand, a prominent mobile provider supports the MCMC's proposed separation of the fixed broadband market into 'business' and 'residential' markets. The provider claims that a different product market is necessary to align with different product segments, such as business and residential services.

Fixed and mobile broadband markets

2.9 A licensee suggests that the MCMC consider the establishment of a single market for broadband and data regardless of technology. The provider cites the continued drive towards continual connectivity, along with higher speeds achievable for mobile broadband, as reasons why fixed and mobile services should be included in the same market.

Wholesale broadband and local access infrastructure

2.10 Several licensees submit that the market should not be separated between wholesale and retail telephony services. The licensees typically do not consider wholesale broadband services as an effective substitute for access to local infrastructure due to the different service definition and elements.

MCMC findings on market definition

Residential and business product markets

2.11 The MCMC received mixed submissions on its proposal to define separate markets for residential and business grade broadband and data services.

2.12 The MCMC accepts that service provision for residential and business broadband offerings generally occurs over the same network elements. However, the MCMC considers that the different preferences between business and residential customers for broadband services (e.g. service quality, reliability and pricing) are significant enough to justify the definition of separate business and residential fixed broadband and data markets.

[38] Telekom Malaysia Response to MCMC Questionnaire at 1.2.

2.13 The MCMC notes that this approach is currently applied in other jurisdictions (e.g. OPTA in the Netherlands and RTR in Austria) and it is supported by submissions that were received from certain licensees.

Fixed and mobile broadband markets

2.14 The MCMC notes that one licensee's submission that fixed and mobile broadband services should be consolidated into a single, technology-neutral market.

2.15 The MCMC disagrees with this submission for several reasons:

(a) mobile broadband services permit users to retrieve data while on the move and in different locations, which is a fundamental deviation from fixed-line services that are only available at a particular location;

(b) fixed broadband services are generally considered to be more reliable and offer higher data transmission speeds than mobile equivalents;

(c) different pricing strategies are used by fixed and mobile broadband providers (e.g. higher data caps for fixed services, etc.); and

(d) different cost structures underlie fixed and mobile broadband provision.

2.16 Therefore, despite the recent improvements in mobile technologies that were identified by a licensee, the MCMC considers that fixed and mobile broadband and data services have significantly different characteristics that mean there should be separate markets.

Wholesale broadband and local access infrastructure

2.17 Lastly, the MCMC notes that all submissions that were received in relation to the substitutability of wholesale broadband and local access infrastructure requested that the MCMC keep these markets separate. The respondents generally viewed these services as having different service definitions and elements. Therefore, the MCMC will not include access to local infrastructure in the wholesale broadband market.

MCMC findings on market for fixed broadband and data services

2.18 In summary, the MCMC considers that there are separate retail fixed broadband markets, each consisting of:

(a) a business market that requires high speed and quality of service for the broadband service; and

(b) a residential market that places less emphasis on quality of service and speed (and pricing) of the services.

2.19 The MCMC also considers there to be a separate wholesale fixed broadband market, which will apply uniformly to both residential and business-grade services.

Assessment of dominance

2.20 The MCMC will apply a technology neutral approach in its assessment of dominance in the fixed broadband markets in Malaysia. Although technology is an important consideration in this analysis, technical features and capabilities can quickly change so the following discussion focuses on speed and quality of broadband services without specific regard to technology.

Market share

2.21 Telekom Malaysia remains the largest fixed broadband provider in Malaysia by a significant margin. Multiple service providers (both within and outside the fixed broadband market) have estimated that Telekom Malaysia currently holds a range of possible market shares, which range from approximately 80% to over 90% market share. For example:

(a) "a market share above 80% for the data and fixed broadband markets;"[39,40]

(b) Over 95% market share for ADSL services and over 85% market share for fibre to the home (**FTTH**) services;[41] and

(c) "more than 90% market share" for fixed communications markets more generally.[42]

The remainder of the market appears to be split between the remaining fixed broadband providers, with each operator having only a minor market share.

2.22 Based on the MCMC's own calculation of market share using publicly available revenue data for 2013,[43] the MCMC estimates that:

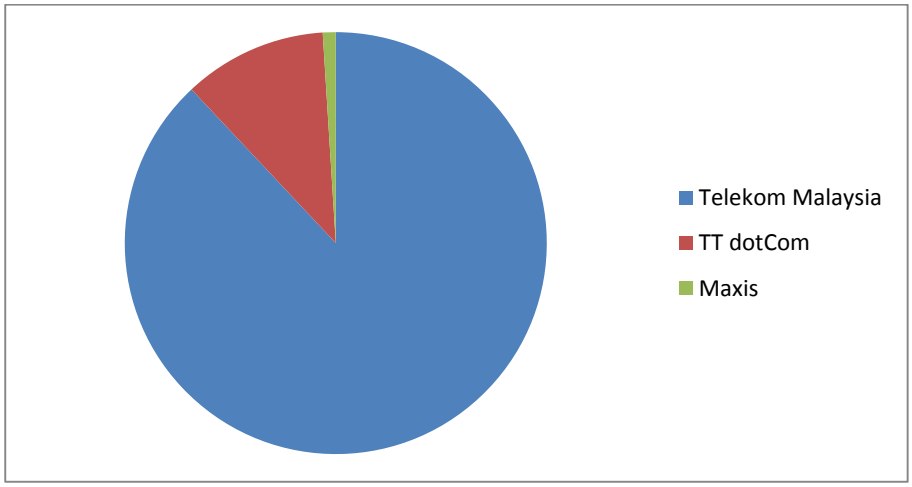
(a) Telekom Malaysia has a market share of approximately 88%;

(b) TT dotCom has a market share of approximately 11%; and

(c) Maxis has a market share of approximately 1%.

[39] TT dotCom Questionnaire Response at 2.1(b).
[40] Packet One Questionnaire Response at 2.1.
[41] Maxis Questionnaire Response at 2.1.
[42] U Mobile Questionnaire Response at page 14.
[43] See: Telekom Malaysia Annual Report 2013, TT dotCom Annual Report 2013 and Maxis Annual Report 2013.

Figure 3: MCMC estimate of market share for fixed broadband and data market in Malaysia



2.23 The MCMC notes that the market share data used in Figure 3 applies generally across both the residential and business fixed broadband markets. While this figure helps illustrate the general distribution of market power in the fixed broadband and data market, the MCMC would welcome any further data that may be used to calculate market share for the separate residential and business fixed broadband markets.

2.24 Furthermore, a high market share does not necessarily equate with dominance. However, with all major competitors of Telekom Malaysia identifying such high levels of market share for the incumbent operator and the MCMC's own calculation indicating the same, the MCMC is inclined to view Telekom Malaysia's significant market share as a strong indicator of its position in the retail fixed broadband and data markets.

2.25 The MCMC notes that Telekom Malaysia has identified a broader market for both fixed and mobile broadband services, which would significantly dilute its market share across the combined broadband market.[44] However, for the reasons outlined in the Market Definition Analysis,[45] the MCMC views fixed and mobile broadband services as forming separate markets.

National fixed network coverage and wholesale access

2.26 Despite recent advancements made by Telekom Malaysia's competitors, it appears that in most regions the incumbent does not yet face effective competition in the fixed broadband and data market. Telekom Malaysia continues to have the most comprehensive copper and fibre-based

[44] For example, Telekom Malaysia claims that its market share in the combined retail market for fixed and mobile voice telephony services is approximately 18% (Telekom Malaysia Questionnaire Response – General at 2.12).
[45] See discussion in Part C of Market Definition Analysis.

networks in Malaysia, the strongest brand name, and the widest portfolio of services.

2.27 Telekom Malaysia's fixed-line network footprint covers most of Malaysia. In contrast, TT dotCom and Maxis report that their investment and hence network presence is largely based in the more densely populated areas of Klang Valley (including Kuala Lumpur), Johor Bharu and Penang.[46] The varying size of each operator's network can have impacts on competition at both the retail and wholesale functional levels of the market, as discussed below.

2.28 Telekom Malaysia is also playing a prominent role in the rollout of the HSBB network across the country. As at February 2014, Telekom Malaysia had rolled out its HSBB network to 103 HSBB exchanges and that 1,496,214 ports had been installed.[47] Telekom Malaysia is the main operator rolling out the HSBB network in Malaysia, which means that its competitors rely on the acquisition of wholesale access in order to be able to offer customers the highest grade broadband and data services.

2.29 In effect, this reliance on Telekom Malaysia's copper and fibre-based networks is likely to enhance the incumbent's significant market power across the national market as its main competitors are required to rely on its price and terms of wholesale access.

Determination of pricing

2.30 The MCMC notes that it has received conflicting views on Telekom Malaysia's pricing strategies from its competitors. One provider claimed that Telekom Malaysia was a price leader in the markets for Metro-Ethernet, FTTH, FTTB and ADSL services.[48] However, another operator claimed that Telekom Malaysia often acted independently of its competitors and did not react to price cuts for rival ADSL and FTTH services.[49]

2.31 Based on its own analysis of pricing trends by the major fixed broadband providers, the MCMC is inclined to agree with the latter position. For example, between 2011 and 2013 price movements for a 10 Mbps FTTH retail broadband plan for Telekom Malaysia and Maxis were as follows:

(a) Telekom Malaysia's price for its Unifi offering did not change;[50] and

(b) Maxis' prices dropped by approximately 32%.[51]

2.32 The MCMC considers that Telekom Malaysia's constant pricing of its broadband offerings and its unresponsiveness to competitor pricing changes present a strong indication that Telekom Malaysia is in a dominant position in the market.

[46] TT dotCom Questionnaire Response at 1.2(d)(ii) and Maxis Questionnaire Response at 1.3(a).
[47] Telekom Malaysia, Report to MCMC.
[48] TT dotCom Questionnaire Response at 2.1(d).
[49] Maxis Questionnaire Response at 2.1(e).
[50] Market data collected by MCMC; TM, 'TM Shop: Unifi' available online at < http://tmshop.tm.com.my/unifi-vip-10> (accessed on 3 May 2014).
[51] See: Maxis Questionnaire Response at 1.5.

Switching costs

2.33 As discussed earlier in relation to the fixed telephony market, the MCMC notes that Telekom Malaysia's existing customers are likely to face significant switching costs which may discourage them from changing providers. As the incumbent operator, Telekom Malaysia inherited a pool of customers and it remains a well-known brand, both of which are likely to make customers reluctant to switch operators even in areas where other options may now be available.

Speed and quality of service (residential / business)

2.34 As discussed in the Market Definition Analysis,[52] the primary drivers for demand of a particular broadband service by residential and business customers tend to be speed and quality of service (and the price of that service, as discussed above). Therefore, competition in the fixed broadband market will largely depend on each provider's ability to effectively compete on these basic service characteristics.

2.35 The speed and quality of service of a customer's broadband connection will often align closely with the level of control that a service provider has over the network. The MCMC notes that the network operator typically has the highest degree of control over the speed and quality of end-to-end data transmission. On the other hand, a service provider that acquires wholesale access to the network will be forced to rely on the network operator for its connection speeds and quality of service, particularly over the 'last mile'.

2.36 This issue was raised by a provider who claimed that a lack of extensive network coverage nationwide forced the provider to acquire bandwidth services from other operators (e.g. Telekom Malaysia and Sacofa) to complete its 'last mile' offering to the end customer. The same provider noted that access was typically required along various parts of the network in many cases (e.g. inter-connect links services and submarine cables for customers in Sabah and Sarawak) to reach end users in areas outside of the provider's own network footprint.[53] In these circumstances, the wholesale customer relies on the wholesale supplier (who may or may not be a competitor at the retail level, as discussed below) for access and has little control over the speed and quality of service that is experienced by end users.

2.37 Therefore, the MCMC considers it likely that the above factors are likely to enhance Telekom Malaysia's significant market power in both the residential and business fixed broadband markets.

Vertical integration and wholesale access issues

2.38 The MCMC also notes the potential advantages that may be accrued by Telekom Malaysia as both a wholesale and retail provider of fixed

[52] For example, see discussion on 'Residential and business-grade broadband' under section 3 of Part B of Market Definition Analysis.
[53] TT dotCom Questionnaire Response at 1.7.

broadband services. For example, it is often the case that at the wholesale level a vertically integrated operator will have an incentive to self-supply to its retail arm on better terms than it offers to its competitors. This is mitigated by the Access List to a certain degree, but other forms of anti-competitive conduct may still take place that are more difficult to regulate (e.g. informational imbalances, poor support services to other wholesale customers, discriminatory network management, etc.).

2.39 An access seeker of Telekom Malaysia's wholesale fixed broadband service gave two examples based on its own experience working with the incumbent:

(a) First, the access seeker noted that as part of its HSBB Agreement it was forced to provide Telekom Malaysia with confidential information about its customers in order to confirm whether coverage would be available for the potential customer. In several cases, the access seeker was told that coverage was not available, but later found that the customer had been approached by a Unifi re-seller offering discounts and access to the HSBB.[54]

(b) Second, the access seeker claimed that Telekom Malaysia's own Unifi service was provided with better quality service (e.g. quicker installation times, faster speed to new markets due to internal operations, etc.) than access seekers that compete with Telekom Malaysia at the retail level.[55]

However, the MCMC notes that these two issues are merely allegations at this time and evidence has not been provided to the MCMC to further substantiate these allegations.

2.40 The MCMC notes that access seeker will typically have less control over the network and the quality of service that they are able to provide to end users (as discussed above). This may be of particular concern to Telekom Malaysia's competitors who compete at the retail level for business and government customers that typically demand a higher degree of quality of service and reliability of broadband service.

2.41 The MCMC is of the preliminary view that Telekom Malaysia is likely to be dominant in both the retail and wholesale markets for residential and business-grade broadband services.

2.42 The MCMC also notes that access regulation is currently not available to help mitigate some of the potential anti-competitive outcomes discussed above in relation to HSBB services. This is because the Access List currently applies for Layer 2 services, but access to HSBB services is only offered as a Layer 3 service. This issue is discussed further below.

[54] Operator Questionnaire Response at 3.1(b).
[55] Operator Questionnaire Response at 3.3.

Barriers to entry or expansion

2.43 The MCMC considers that the fixed data and broadband market are likely to be characterised by high barriers to entry or expansion.

2.44 However, unlike the fixed telephony market, the MCMC notes that access regulation is currently not available for access to HSBB services. This provides a further barrier to entry and expansion as effective access to HSBB services is made more difficult as access seekers are not afforded the protection of the Access List.

2.45 The MCMC considers that the high barriers to entry and expansion associated with fixed-line services are likely to preserve Telekom Malaysia's strong position in the fixed data and broadband market, although in some instances the MCMC also notes that rival investment has not been pursued even where such investment could be justified.

Preliminary finding on dominance

2.46 The MCMC is of the preliminary view that Telekom Malaysia is the dominant provider of fixed line broadband and data services in the national retail and wholesale markets for:

(a) residential-grade broadband services; and

(b) business-grade broadband services.

Question 2

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you agree with the preliminary market share findings?
(c) Are there any additional competition issues that the MCMC should consider before making its final determination on dominance?
(d) Do you have any statistics or information on access to wholesale DSL?
(e) Do you agree or disagree with the MCMC's preliminary finding on dominance?

3 Mobile telephony

Market overview

3.1 Mobile telephony is an increasingly important mode of communication in Malaysia. As of 2013, it is estimated that there were over 40 million mobile subscriptions in Malaysia with approximately 18 million of those being 3G subscriptions. This represents a 143.6% penetration rate.[56]

3.2 In 2013, the Malaysia mobile market continued to see substantially more prepaid subscribers than postpaid subscribers, in the ratio of almost 80:20. The total number of prepaid subscribers reached 35.3 million and there were a further 7.6 million postpaid subscribers over the same period.[57]

3.3 The mobile telephone penetration rate continues to vary quite dramatically across Malaysia. As of 2012, the states with the highest mobile telephone penetration rates were W.P. Kuala Lumpur (203.5%) and Selangor (154.4%), while the state with the lowest penetration rate was Sabah (87.6%). In addition, the percentage of mobile telephone users was significantly greater in urban areas (68.8%) than in rural areas (31.2%).[58]

3.4 Mobile telephony is provided by cellular providers such as Celcom, Maxis, DiGi and U-Mobile. There are also two main WiMAX providers, Packet One and YTL Corporation.

3.5 Mobile Virtual Network Operators (**MVNOs**) are also present in the provision of mobile telephony services in Malaysia. Some of the major MVNOs include (among others) Tune Talk, Merchantrade, Altel, XOX Com and Redtone Mobile.

Summary of submissions on market definition

Fixed, mobile and VoIP telephony services

3.6 A fixed service provider submits that due to continuous fixed-to-mobile substitution there should be a single, combined market for voice services that includes fixed telephony, mobile telephony and VoIP.

3.7 However, a prominent mobile operator disagrees and supports the MCMC's decision to include fixed and mobile telephony services in separate markets. In addition to the supply-side differences (e.g. technology and network, spectrum and investment decisions, etc.), the operator notes that there are also distinct cost differences between fixed and mobile operators as the cost of delivering voice traffic via a fixed network differs from the cost of delivering voice traffic over a mobile network.

[56] MCMC, *Communications and Multimedia Pocket Book of Statistics Q4 2013*.
[57] MCMC, *Communications and Multimedia Pocket Book of Statistics Q4 2013*.
[58] MCMC, *Communications and Multimedia Pocket Book of Statistics Q4 2013* (2013) at page 19 – 20.

Mobile product groups in a single market

3.8 A prominent mobile operator submits that individual mobile product groups (i.e. telephony, SMS and data services) do not constitute separate markets as they are highly substitutable to each other in a single mobile communications market. The operator argues that such a market applies for the retail and wholesale functional levels as well.

3.9 On the demand side, the operator notes that these mobile services are highly substitutable for the following reasons:

(a) consumers often use SMS and voice in substitution;

(b) consumer behaviour indicates very high degree of substitution once a smartphone is purchased and an OTT application is downloaded at very little cost (with anecdotal evidence suggesting that many consumers try to avoid using traditional voice and SMS and rely on OTT services);

(c) the low cost of using OTT applications (often downloaded for free or at minimal cost) means that consumers can have many applications such that they can easily communicate with anyone they wish across multiple platforms and devices; and

(d) the decline of "data only" access via dongles (Wireless Broadband) shows that mobile broadband is not a separate broadband market.

3.10 On the supply side, the operator notes that:

(a) from the network and radio engineering perspective, mobile operators do not deploy separate radio carriers for voice and data, and all carriers are fully enabled for both, subject to QoS parameters; and

(b) technology upgrades are typically based on generation of technologies in general and not based on SMS, voice and data;

Temporal dimension for OTT telephony services

3.11 Several licensees raised the possible inclusion of OTT services (e.g. as a temporal dimension) in the mobile telephony market. For example, one mobile operator notes that OTT services are likely to be strong substitutes for mobile SMS/MMS messaging services, but that there may not be a significant substitution effect in respect of OTT telephony, except in the case of international voice calling, international roaming and video call services.

3.12 Further, one mobile provider has requested that the MCMC take steps to regulate OTT services in the same way that other traditional mobile services are regulated (e.g. quality of service standards, spamming, privacy, etc.).

3.13 However, one mobile provider has taken a contrary view and does not consider that a temporal dimension should be considered for OTT telephony services.

Prepaid and postpaid services

3.14 A prominent mobile operator agrees with the MCMC's view that prepaid and postpaid services should be considered substitutable. The operator notes that traditional use of prepaid and postpaid plans to target different customer segments or user groups is changing. For example, many mobile providers now allow subscribers to switch from prepaid to postpaid and vice versa without the need to terminate the original subscription.

MCMC findings on market definition

Fixed, mobile and VoIP telephony services

3.15 The MCMC received submissions both for and against the separation of fixed, mobile and VoIP telephony markets.

3.16 The MCMC accepts that fixed-to-mobile substitution continues to occur in Malaysia. However, for the reasons discussed above in section 1 of Part B in relation to the fixed telephony services market (e.g. different pricing strategies, fixed versus mobile capabilities, etc.), the MCMC considers that separate fixed and mobile telephony markets exist.

3.17 Further, the MCMC also notes that this position is supported by several licensees. One such licensee also notes that the supply-side differences (e.g. technology and network, spectrum and investment decisions, etc.), between the two technologies further justifies the separation of fixed and mobile telephony markets.

Mobile product groups in a single market

3.18 One mobile operator raises the possibility of a single, combined market for the key mobile product groups (i.e. telephony, SMS and data). The operator also provided a list of demand-side and supply-side factors to support its claim of a single mobile services market.

3.19 While the MCMC accepts that some substitutability may exist between mobile telephony, SMS and data services (e.g. customers often use text and calls interchangeably, OTT applications may be used instead of a call or SMS message, etc.), the MCMC considers that these mobile services are fundamentally different for a number of reasons, such as:

(a) customers may use SMS messaging to convey a short message, but they are unlikely to view a messaging service as a viable substitute for a longer or more detailed telephone call;

(b) unlike mobile telephony and SMS messaging services, OTT services rely on a data connection and are not provided over the voice channel of the mobile network which can lead to reliability issues

(e.g. mobile speeds can differ based on the number of users in a mobile cell or due to network management practices);

(c) OTT also require users to have a smartphone and download the same application (e.g. Skype, WhatsApp, etc.) in order to be able to communicate with each other; and

(d) the pricing strategies and structures differ significantly for mobile telephony, broadband and SMS messaging.

3.20 Therefore, the MCMC proposes to define mobile telephony, SMS and data services in separate retail markets for now. However, the MCMC accepts that at the wholesale functional level, messaging is required by MVNOs and resellers as part of a package of services including telephony and SMS. Hence, at the wholesale functional level, the MCMC considers that there is a single mobile telephony and messaging market.

Temporal dimension for OTT telephony services

3.21 The MCMC notes that several licensees discussed the possible inclusion of OTT services in the temporal dimension of the mobile telephony market. In general, these operators claimed that data-based telephony services should be subject to the same regulatory regime as mobile telephony services because both provided voice services to customers. One licensee noted that this was particularly true for international voice calling, international roaming and video call services.

3.22 While the MCMC accepts that there is some degree of substitution, it does not view OTT telephony services as being sufficiently close substitutes for mobile telephony services at this time. These services require users to have a smartphone with a particular voice application service downloaded in order to communicate with another user (who also must have a smartphone with the same application downloaded). Further, unlike data-based messaging services which are often automatic (e.g. iPhone-to-iPhone messaging) and are regularly used to avoid paying SMS charges, OTT telephony services often charge users if they "call out" to a phone over the mobile voice network.

3.23 For these reasons, the MCMC does not consider OTT telephony services to form part of the mobile telephony market at this time. However, the MCMC has re-considered its position in relation to data-based messaging services, which are now included in the market for mobile messaging services (as discussed in section 5 below).

Prepaid and postpaid services

3.24 The MCMC notes a prominent mobile operator agrees with the MCMC's position that prepaid and postpaid services should be considered as substitutable and therefore in the same market. The MCMC did not receive any submissions to the contrary.

3.25 Therefore, the MCMC continues to view prepaid and postpaid mobile services as being part of a single mobile telephony market.

MCMC findings on market for mobile telephony services

3.26 The MCMC is of the view that both national retail and wholesale markets for mobile telephony services exist.

3.27 The MCMC does not view fixed-line telephony services (including VoIP) to be an effective substitute for mobile telephony services at this time.

Assessment of dominance

Market Share

3.28 The MCMC notes that a number of market participants have estimated varying market shares for the mobile telephony market.

3.29 DiGi estimates mobile subscriber market shares in 2012 for the main three MNOs as:

(a) DiGi: [c-i-c] for postpaid and [c-i-c] for prepaid mobile;

(b) Maxis: [c-i-c] for postpaid and [c-i-c] for prepaid mobile; and

(c) Celcom: [c-i-c] for postpaid and [c-i-c] for prepaid mobile.[59]

3.30 Maxis estimates mobile subscriber market shares in 2012 for the main three MNOs as DiGi at 28%, Celcom at 34% and Maxis at 38%.[60]

3.31 U Mobile estimated its own market share at approximately [c-i-c] of total revenue for the entire mobile market.[61]

3.32 Telekom Malaysia estimates market shares for a combined fixed and mobile telephony retail market as:

(a) Maxis: 30%;

(b) Celcom: 28%;

(c) DiGi: 22%;

(d) Telekom Malaysia: 18%; and

(e) Others: 2%.[62]

However, for the reasons stated in the Market Definition Analysis,[63] the MCMC does not consider fixed and mobile telephony services as sufficient substitutes to justify their inclusion in a combined market.

[59] DiGi Questionnaire Response at 1.10.
[60] Maxis Questionnaire Response at Appendix 1.
[61] U Mobile Questionnaire Response at 1.11.
[62] Telekom Malaysia Questionnaire Response at 2.12.
[63] See discussion on 'Mobile telephony as a possible substitute for fixed telephony' under section 2 of Part B of Market Definition Analysis.

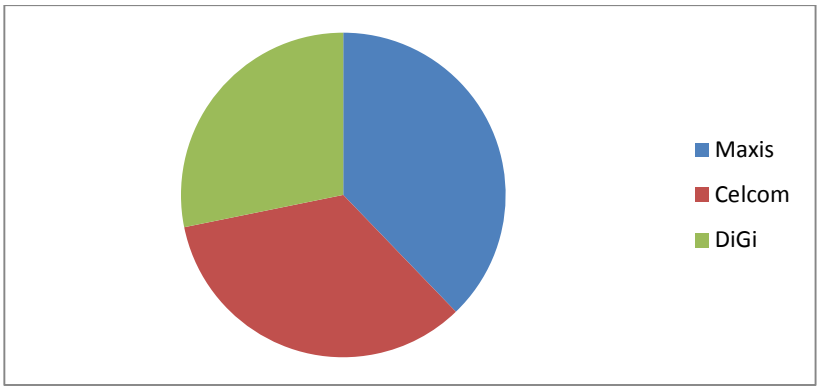
3.33 The MCMC also notes that an independent market research company, Frost & Sullivan, has estimated market share in the mobile market in 2012 for the largest three MNOs as:

(a) Maxis: 32.3%;

(b) Celcom: 29.1%; and

(c) DiGi: 24.1%.[64]

Figure 4: Market share for mobile telephony market in Malaysia



Source: Frost & Sullivan, '*Robust growth for Malaysian mobile market in coming years with rising demand for internet'*.

3.34 The above market share estimates are broadly in line with the data that was collected by the MCMC in 2013, as follows:

(a) Maxis had approximately 30.0% share of mobile subscribers and 35.2% share of revenue;

(b) Celcom had approximately 32.1% share of mobile subscribers and 33.2% share of revenue;

(c) Digi had approximately 26.8% share of mobile subscribers and 27.9% share of revenue; and

(d) U Mobile had approximately 11.1% share of mobile subscribers and 3.8% share of revenue.

3.35 All of the above market share estimates taken together provide a good indication that no single mobile operator appears to have a commanding advantage in market share for the mobile markets. Therefore, market share will not be regarded as a key factor when assessing dominance in the mobile telephony market.

Market structure and the nature of competition

[64] Frost & Sullivan, *Robust growth for Malaysian mobile market in coming years with rising demand for internet*, available online at: http://www.frost.com/prod/servlet/press-release.pag?docid=288221989.

3.36 The Malaysian mobile telephony market continues to experience strong growth. In 2013, there were an estimated 40 million mobile subscribers in Malaysia with a mobile penetration rate at a relatively high 143.6%.[65]

3.37 In response to the growing demand for mobile services, the MCMC notes that a number of new operators (e.g. U Mobile, YTL and various MVNOs such as XOX, Tron, Friendi, etc.) have entered the mobile market since the last dominance study was conducted in 2004.

3.38 Unlike the fixed telephony market, the MCMC notes that almost all MNOs claim to offer nationwide network coverage.[66] This network coverage is also generally made available to MVNOs that acquire wholesale access to an MNO network.[67] This means that most mobile providers are not likely to be limited in their ability to compete in the market due to a lack of network coverage in certain geographic locations (which tends to be the case for fixed telephony providers, as discussed in earlier sections).

3.39 Further, the MCMC notes that various mobile operators have stated that they believe the mobile telephony market in Malaysia is competitive and that no further regulatory intervention is required at this time.[68] The MCMC agrees with this position and is of the preliminary view that the mobile telephony market is currently subject to effective competitive constraints.

Mobile telephony plans and pricing

3.40 In general, mobile pricing by Malaysian MNOs and MVNOs tend to be comparable for their respective mobile telephony and data packages. The growing use of bundled mobile telephony and broadband products and the vigorous competition in the mobile space has benefitted consumers, which has translated into continued uptake and growth of mobile services across Malaysia.

3.41 For the six month period between August 2013 and February 2014, the MCMC notes that there were a number of price reductions, promotional offers and new plan offerings made by various mobile telephony providers. For example, within this period:

(a) DiGi introduced a new postpaid voice plan, reduced the rates for its iDiGi138 and iDiGi238 postpaid plans and introduced a new prepaid smart plan;

(b) U Mobile implemented a promotional offer for a prepaid product, introduced a new postpaid plan and increased data quotas for a bundled calling plan; and

(c) Maxis introduced a new postpaid plan.[69]

[65] MCMC, *Communications and Multimedia Pocket Book of Statistics Q4 2013*.
[66] For example, see: Maxis Questionnaire Response at 1.3, Celcom Questionnaire Response at 1.3 and DiGi Questionnaire Response at 1.3.
[67] For example, see: Maxis Questionnaire Response at 1.3.
[68] For example, see: Celcom Questionnaire Response at Appendix 6 and Maxis Questionnaire Response at 2.1.
[69] Market data collected by the MCMC for August 2013 to February 2014.

3.42 The MCMC considers that such a high degree of activity by mobile operators likely signifies a relatively high level of competition in the retail mobile telephony market. In comparison, the MCMC notes that no pricing or plan changes were observed in the fixed telephony market.

Wholesale services and MVNOs

3.43 There has been a growing trend of MNOs partnering with MVNOs in recent years. The MCMC notes that this trend has served to increase competition to a small degree in the retail mobile telephony market because there are a larger number of providers competing for customers, however the total market share of MVNOs in the retail mobile telephony market is relatively small.

3.44 The MCMC notes that in many cases MVNOs have entered the mobile market and targeted a specific customer segment which further spurs competition among existing market participants. For example, Maxis noted that following its MVNO deals with ITEL Mobile Network Sdn Bhd and Telekomunikasi Indonesia International (Malaysia) Sdn Bhd, the operator noticed a greater uptake of customers from new niche market segments (e.g. migrants in Malaysia) onto its network.[70]

3.45 Wholesale access prices (excluding mobile termination prices) are not regulated and are left to commercial negotiations. However, it appears that the level of competition between MNOs to partner with MVNOs (e.g. to target particular customer segments, to gain a wholesale revenue stream, etc.) has prevented any one operator from achieving a dominant position in the wholesale mobile access market. This position was supported by Maxis in its submission to the MCMC.[71]

Existence of a vigorous and effective competitor

3.46 The MCMC notes that vigorous and effective competitors can have a significant impact on the state of competition in the market. The presence of a vigorous competitor, even if that competitor has a relatively low market share, may act as an effective constraint on the ability of a licensee to increase prices or reduce output.

3.47 Several prominent operators have pointed to U Mobile's recent entry and rapid growth in the Malaysian mobile market as an indicator that the market is relatively competitive.[72] Maxis noted that its interconnect call traffic growth with U Mobile grew by 400% between September 2011 and September 2012.[73]

3.48 Similarly, several of the larger MNOs identified U Mobile as a competitor[74] and potential price leader in the mobile telephony market.[75] U Mobile also

[70] Maxis Questionnaire Response at 1.8.
[71] Maxis Questionnaire Response at 2.1.
[72] For example, see: Celcom Questionnaire Response at 2.2 and Maxis Questionnaire Response at 1.8.
[73] Maxis Questionnaire Response at 1.10.
[74] For example, see: Maxis Questionnaire Response at 2.1.
[75] Maxis Questionnaire Response at 2.1 and Packet One Questionnaire Response at 2.1.

appears to view itself as a price leader, noting in its own submission to the MCMC that it often lowers its prepaid mobile prices in an effort to compete with the larger mobile providers.[76] However, Telekom Malaysia claimed that it viewed U Mobile as a price follower in the market.[77]

3.49 Therefore, although U Mobile claims to have only a modest [c-i-c] share of the mobile market,[78] the MCMC notes that it is possible that U Mobile is having an impact on competition in the market that is disproportionate to its size. The fact that the other, larger MNOs are taking note of U Mobile's growth and pricing activities would appear to indicate that the smaller provider is serving as a further constraint on competition in the market.

Barriers to entry

3.50 Barriers to entry or expansion in the mobile telephony market appear to be much lower than the barriers discussed above in relation to the fixed telephony and broadband markets. For example:

(a) the range of available wholesale models (i.e. from branded re-seller to full MVNO) in the mobile market tends to make it easier for potential entrants to find a suitable business model that matches their financial resources and appetite for risk;

(b) the legal and regulatory requirements associated with mobile services are generally viewed by the industry as being less onerous and costly than for fixed equivalents;[79] and

(c) one operator pointed to the MCMC's perceived proactive approach in relation to the issuing of licences as a factor supporting further entry into the mobile market moving forward.[80]

3.51 However, the MCMC also notes the following barriers to entry or expansion which may still limit the ability of potential competitors to provide a further competitive constraint on existing mobile operators:

(a) Infrastructure costs. Entry or expansion in the mobile telephony market requires access to transmission and other mobile infrastructure (e.g. towers). The erection of mobile facilities involves investment in capital assets, which tend to be sunk costs. However, the MCMC notes that a number of advances in the industry, such as a growing number of MVNO deals and increased network sharing arrangements, have meant that the cost of entry or expansion in the mobile market appears to be declining.[81] This likely explains the growing number of MVNOs in comparison to MNOs in the Malaysian market.

[76] U Mobile Questionnaire Response at 1.12(e).
[77] Telekom Malaysia Questionnaire Response at 2.12.
[78] U Mobile Questionnaire Response at 1.10.
[79] Telekom Malaysia Questionnaire Response at 2.13(e).
[80] Telekom Malaysia Questionnaire Response at 2.13(b).
[81] Maxis Questionnaire Response at 2.2.

(b) Access to spectrum. The mobile sector is dependent on access to spectrum, which is typically viewed as a scarce resource. DiGi notes that uneven spectrum allotments and the assignment of primarily high frequency spectrum can raise costs, particularly for smaller operators which typically have high average costs.[82] However, DiGi also notes that the likelihood of increasing spectrum (e.g. 800MHz and 900MHz) availability moving forward may lead to further entries into the market in the next 3 to 5 years.[83]

(c) Economies of scale and scope. The economics of communications networks are characterised by economies of scale and density externalities, which put larger players at an advantage relative to smaller operators. Celcom identified the ability to offer network coverage across a sizeable proportion of the country as a minimum requirement for entry into mobile services markets.[84] However, this may be addressed by entering into wholesale MVNO arrangements with an MNO that has nationwide mobile network coverage.

3.52 The MCMC notes that various operators have also stated that barriers to entry or expansion in the mobile market tend to be relatively low.[85] These operators point to the entry of U Mobile, YTL and various MVNOs (e.g. XOX, Tron, Friendi, etc.) into the mobile market in recent years as an indicator that barriers to entry tend to be relatively low.[86]

3.53 The MCMC agrees with these submissions and considers that, although there may be significant barriers to entry (e.g. infrastructure costs or access to spectrum), the regulatory environment and range of possible business models now available (e.g. the range of possible MVNO wholesale structures) have generally kept barriers relatively low in mobile markets in recent years. This position is supported by the number of recent entrants in the mobile sector.

Preliminary finding on dominance

3.54 The MCMC is of the preliminary view that the markets for mobile telephony services at the wholesale and retail levels are relatively competitive and that no single operator is in a dominant position in either the retail or wholesale markets at this time.

Question 3

The MCMC is seeking views on the following:
(a) Do you have any further comments on market definition?
(b) Do you agree with the preliminary market share findings?

[82] DiGi Questionnaire Response at 2.2(e)(ii).
[83] DiGi Questionnaire Response at 2.2(b)(ii).
[84] Celcom Questionnaire Response at 2.3(a).
[85] For example, see: Celcom Questionnaire Response at 2.2 and DiGi Questionnaire Response at 2.2.
[86] Celcom Questionnaire Response at 2.2 and DiGi Questionnaire Response at 2.2(a).

(c) Are there any additional competition issues that the MCMC should consider before making its final determination on dominance?
(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

4 Mobile broadband and data (including WiMAX)

Market overview

4.1 Mobile broadband and data is provided by the MNOs, MVNOs and WiMAX licensees described in section 3 of Part B above.

4.2 Demand for mobile broadband and data has been substantially enhanced by smartphone and broadband penetration. In Malaysia, smartphone penetration is reported to have increased from 47% in 2012 to 63% in 2013, while tablet penetration increased almost threefold from 14% to 39% over the same period.[87]

Summary of submissions on market definition

Fixed and mobile broadband and data

4.3 A fixed service provider submits that there should be a single market for broadband and data services that includes fixed telephony, mobile telephony and VoIP.

4.4 However, a prominent mobile operator disagrees and supports the MCMC's decision to include fixed and mobile broadband and data services in separate markets. Further, the operator notes that the differences are more pronounced than telephony markets. For example, in addition to the points raised in the Market Definition Analysis, the operator also notes that:

(a) fixed broadband services, whether at a residential or commercial premises, are used by multiple users typically on a single subscription account via WiFi access or LAN access; and

(b) mobile broadband services are typically consumed based on a single-user, single-subscription basis.

4.5 A prominent mobile provider agrees that mobile and fixed services should not form part of the same retail product market. In particular, the provider agrees that mobile communications and DELs are not supply-side substitutes. However, the provider also notes that WiFi (connected to broadband lines) has the effect of depressing mobile broadband pricing.

[87] The Star, Smartphone penetration hits 63% in Malaysia (12 September 2013) available online at:< http://www.thestar.com.my/Tech/Tech-News/2013/09/12/Smartphone-and-tablet-penetration-hits-63-percent.aspx/>

Individual mobile product groups in a single market

4.6 For the reasons set out in the previous section on mobile telephony services, the MCMC notes that a prominent mobile operator supports a single mobile market for telephony, SMS and data services. The operator argues that such markets apply at the retail and wholesale functional levels.

WiMAX in the mobile broadband and data market

4.7 One provider notes that, although WiMAX is not a mobile technology but rather a fixed (or portable) broadband wireless technology, it should be included in the market for mobility broadband service. This position is broadly supported by other licensees as well.

4.8 Another mobile provider disagrees with the inclusion of WiMAX services in the market for mobility broadband services. The provider notes that although WiMAX may be substitutable on the supply side, the 'Fixed Nomadic One' product offered by some WiMAX operators more closely resembles a fixed broadband service, which is supported by the response to WiMAX that many fixed services providers have undertaken.

MCMC findings on market definition

Fixed and mobile broadband and data

4.9 With the exception of one fixed services operator, the MCMC notes that most of the submissions that it received were in favour of defining separate markets for fixed and mobile broadband and data services.

4.10 Therefore, for the reasons set out in the Market Definition Analysis (e.g. different consumption patterns, technical limitations, capacity and pricing)[88] and the additional points that were raised by licensees above, the MCMC considers that fixed and mobile broadband services should be viewed as forming separate markets.

Individual mobile product groups in a single market

4.11 As discussed in the previous section in relation to mobile telephony services, the MCMC disagrees with the proposition that a single, combined mobile market exists for telephony, SMS and data services.

4.12 In particular, the MCMC notes that key differences in usage patterns, network availability and reliability, and pricing justify defining mobile telephony, SMS and data services into separate markets, although the MCMC has made an adjustment in the wholesale market by combining mobile telephony and messaging services, as described above.

[88] See: discussion on 'Fixed and mobile broadband substitution' under section 3 of Part D of Market Definition Analysis.

WiMAX in the mobile broadband and data market

4.13 In the Market Definition Analysis, it was noted that despite minor differences in pricing and functionalities, the MCMC considers mobile and WiMAX data services as substitutable products within a single market. The MCMC notes that most licensees appear to broadly support this position.

4.14 The MCMC also notes a licensee claims that WiMAX services more closely resemble fixed broadband services than mobile services. The licensee uses the 'Fixed Nomadic One' product to illustrate this example.

4.15 The MCMC accepts that WiMAX services share some similar attributes to fixed broadband services (e.g. WiMAX offers relatively high data transmission rates, WiMAX is typically offered over fixed area, etc.). However, there are significant differences between the technologies in terms of pricing and capability that lead the MCMC to conclude that WiMAX remains a closer substitute for mobile rather than fibre broadband services.

MCMC findings on market for mobile broadband and data services

4.16 For the above reasons, the MCMC considers there to be national retail and wholesale markets for mobile broadband and data services, which includes WiMAX.

Assessment of dominance

Market share

4.17 A number of market participants have estimated varying market shares for the mobile broadband market, as well as the broader mobile services market more generally.

4.18 DiGi estimates subscriber market shares broadly across the mobile market in 2012 for the main three MNOs as:

(a) DiGi: [c-i-c] for postpaid and [c-i-c] for prepaid mobile;

(b) Maxis: [c-i-c] for postpaid and [c-i-c] for prepaid mobile; and

(c) Celcom: [c-i-c] for postpaid and [c-i-c] for prepaid mobile.[89]

4.19 Packet One claims to have approximately 8% market share in the mobile broadband retail market for 2013.[90]

4.20 Maxis estimates subscriber market shares in 2012 for the main three MNOs as DiGi at 28%, Celcom at 34% and Maxis at 38%.[91]

4.21 U Mobile estimated its own market share at approximately [c-i-c] of total revenue for the entire mobile market.[92]

[89] DiGi Questionnaire Response at 1.10.
[90] Packet One Questionnaire Response at 1.10.
[91] Maxis Questionnaire Response at Appendix 1.

4.22 The MCMC also notes that an independent market research company, Frost & Sullivan, has estimated market share in the mobile market in 2012 for the largest three MNOs as:

(a) Maxis: 32.3%;

(b) Celcom: 29.1%; and

(c) DiGi: 24.1%.[93]

4.23 Telekom Malaysia have estimated market shares for a combined fixed and mobile telephony retail market as:

(a) Maxis: 30%;

(b) Celcom: 28%;

(c) DiGi: 22%;

(d) Telekom Malaysia: 18%; and

(e) Others: 2%.[94]

However, for the reasons stated in the Market Definition Analysis,[95] the MCMC does not consider fixed and mobile broadband services as sufficient substitutes to justify their inclusion in a combined market.

4.24 All of the above market share estimates taken together appears to provide a good indication that no single mobile operator has a commanding advantage in market share. This position is further supported by the presence of WiMAX operators, Packet One and YTL, in the market for mobile broadband and data services.

Market structure and the nature of competition

4.25 The Malaysian mobile broadband market continues to grow at a staggering rate. In 2013, there were an estimated 40 million mobile subscribers in Malaysia with a mobile penetration rate at a relatively high 143.6%.[96] Further, as discussed above, there has also been a corresponding growth in use of smart phones and tablets, which further demonstrates increasing demand for mobile broadband and data.

4.26 In response to this growth in demand for mobile broadband services, the MCMC notes that:

(a) a number of new mobile providers (e.g. U Mobile and various MVNOs such as XOX, Tron, Friendi, etc.); and

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[92] U Mobile Questionnaire Response at 1.11.
[93] Frost & Sullivan, *Robust growth for Malaysian mobile market in coming years with rising demand for internet*, available online at: http://www.frost.com/prod/servlet/press-release.pag?docid=288221989.
[94] Telekom Malaysia Questionnaire Response at 2.12.
[95] See discussion on 'Mobile telephony as a possible substitute for fixed telephony' under section 2 of Part B of Market Definition Analysis.
[96] MCMC, *Communications and Multimedia Pocket Book of Statistics Q4 2013*.

(b) WiMAX operators such as YTL and Packet One,

have entered the mobile market since the 2004 Dominance Study.

4.27 The MCMC notes that many of the same competition issues raised in relation to mobile telephony services in section 3 above will also apply for the mobile broadband market. In short, some of the key issues to consider include:

(a) Network coverage. Nearly all MNOs claim to offer nationwide network coverage,[97] which is typically also made available to any MVNOs that acquire wholesale access from the MNO's network.[98] This effectively puts all mobiles operators on a level playing field with regard to network coverage.

(b) Wholesale services and MVNOs. There has been a growing trend of MNOs partnering with MVNOs in recent years in Malaysia, which has increased the number of competitors in the mobile broadband market. MVNOs typically target a somewhat niche customer segment which can spur competition in the market. For example, Maxis noted that following its MVNO deals with ITEL Mobile Network Sdn Bhd and Telekomunikasi Indonesia International (Malaysia) Sdn Bhd, the operator noticed a greater uptake of customers from new niche market segments (e.g. migrants in Malaysia) onto its network.[99] However, the MCMC also notes that despite the surge of new MVNO entries into the market, these retail providers continue to have only a minor share of the retail market, which suggests that their impacts on competition are limited.

4.28 The MCMC notes that most mobile operators have stated that they view the mobile broadband and data market in Malaysia as competitive. Most of these operators also believed that no further regulatory intervention was required at the moment.[100] The MCMC agrees with this position and is of the preliminary that the mobile broadband market is currently subject to effective competitive constraints.

Access to transmission and co-location facilities

4.29 Several mobile operators have noted that access to transmission and co-location facilities at affordable rates was often an issue, particularly in regions where alternative suppliers were not readily available. For example, Maxis notes that:

(a) in select localities there are no alternatives for infrastructure sharing and operators have to use state-based companies;[101] and

[97] For example, see: Maxis Questionnaire Response at 1.3, Celcom Questionnaire Response at 1.3 and DiGi Questionnaire Response at 1.3.
[98] For example, see: Maxis Questionnaire Response at 1.3.
[99] Maxis Questionnaire Response at 1.8.
[100] For example, see: Celcom Questionnaire Response at Appendix 6 and Maxis Questionnaire Response at 2.1.
[101] Maxis Questionnaire Response at 2.4.

(b) a general lack of competitiveness in the various transmissions markets (e.g. due to Telekom Malaysia's dominant position in certain areas) can lead to heightened access prices for mobile operators.[102]

Mobile plans and pricing

4.30 In general, mobile broadband prices tend to be comparable for most MNO, MVNO and WiMAX voice, broadband and data packages. The growing use of bundled mobile telephony and broadband products and the vigorous competition in the mobile space has benefitted consumers, which has translated into continued uptake and growth of mobile services across Malaysia.

4.31 For the six month period between August 2013 and February 2014, the MCMC notes that there were a number of price reductions, promotional offers and new plan offerings made by various mobile broadband providers. For example, within the period in question:

(a) DiGi introduced a promotional increase in data for one of its prepaid plans;

(b) U Mobile increased quotas for two of its prepaid plans;

(c) Maxis introduced various 4G promotional offers (e.g. free modem, swap for a 4G SIM card, etc.) and a new 4G LTE postpaid plan, and offered 50% extra data for prepaid customers;

(d) Celcom began offering 4G LTE upgrade packages;

(e) Packet One introduced a new unlimited home postpaid plan and a new triple quota plan; and

(f) YTL increased the quota for its Super Postpaid Plan.[103]

4.32 The MCMC considers that such activity by providers is likely to indicate that competition currently exists in the mobile broadband and data market.

Barriers to entry

4.33 Barriers to entry or expansion in the mobile broadband market are the same as those discussed above in section 3 in relation to mobile telephony services. The key barriers include:

(a) infrastructure costs, although the MCMC notes that a number of advances in the industry (e.g. a growing preference for wholesale access and increased network sharing arrangements),[104] have meant that the cost of entry or expansion in the mobile market appears to be declining;

[102] Maxis Questionnaire Response at 3.1(c).
[103] Market data collected by the MCMC for August 2013 to February 2014.
[104] Maxis Questionnaire Response at 2.2.

(b) access to spectrum was historically viewed as a scarce resource and a barrier to entry into the mobile market, but the likelihood of increasing spectrum (e.g. 800MHz and 900MHz) availability moving forward appears to limit the effect of this potential barrier; and

(c) economies of scale and scope, such as the ability to offer network coverage across a sizeable proportion of the country which may be considered as a minimum requirement for entry into mobile services markets.[105]

4.34 The MCMC considers that the range of possible business models that are now available to new or existing providers (e.g. a range of MVNO structures) have generally kept barriers to entry or expansion low for the mobile broadband and data market in recent years.

4.35 The MCMC notes that this position was supported by various operators which also stated that barriers to entry or expansion in the mobile market tend to be relatively low at the moment.[106] These operators point to the entry of U Mobile, YTL and various MVNOs (e.g. XOX, Tron, Friendi, etc.) in recent years as an indicator that barriers to entry tend to be low for mobile services markets.[107]

Preliminary finding on dominance

4.36 The MCMC is of the preliminary view that the market for mobile broadband and data services is relatively competitive and that no single operator is in a dominant position within the market at this time.

Question 4

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you agree with the preliminary market share findings?
(c) Are there any additional competition issues that the MCMC should consider before making its final determination on dominance?
(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

5 Mobile messaging services (including SMS and OTT)

Market overview

5.1 Messaging services are generally provided by the MNOs, MVNOs and WiMAX licensees described in section 3 of Part B above.

[105] Celcom Questionnaire Response at 2.3(a).
[106] For example, see: Celcom Questionnaire Response at 2.2 and DiGi Questionnaire Response at 2.2.
[107] Celcom Questionnaire Response at 2.2 and DiGi Questionnaire Response at 2.2(a).

5.2 Section 4 of Part B regarding mobile broadband and data also assists to set the scene. Most mobile pricing plans now also include a messaging allowance for over-the-top (**OTT**) message applications (e.g. WhatsApp).

Summary of submissions on market definition

5.3 One operator views data-based messaging services as only a partial substitute for SMS/MMS for the following reasons:

(a) SMS remains the fall back delivery technology if OTT services do not work (e.g. iMessage on IOS devices);

(b) OTT services require a smartphone and smartphone penetration still remains relatively low in Malaysia; and

(c) OTT services require users to sign up for that particular service in order to communicate with other users and there are multiple competing OTT messaging services available.

The operator believes that consideration of a temporal dimension would mean that the mobile messaging market includes OTT messaging services.

5.4 On the other hand, several mobile providers support the possible inclusion of OTT services in the mobile SMS messaging services market. For example, one mobile operator points to the decline in SMS volumes and revenues and the growth in smartphone penetration in Malaysia as evidence of the substitutability of OTT services and traditional SMS/MMS messaging services, however a close causal connection has been more difficult to establish through direct evidence.

5.5 Similarly, another mobile provider disagrees with the MCMC defining markets in respect of particular technologies and from particular types or classes of suppliers rather than from the perspective of consumers. The provider notes that where conditions of supply are broadly similar this may lead to the widening of markets to include multiple products. For example, the supply of mobile voice, mobile SMS and mobile data are typically provided by the same operators.

5.6 One licensee supports the inclusion of OTT messaging services in the market for SMS/MMS messaging services and claims that it is not necessary to consider a temporal dimension due to the fast take-up rate of OTT or other social messaging services over traditional mobile messaging services.

MCMC findings on market definition

5.7 The MCMC received a number of submissions in favour of including OTT messaging services within the proposed market for SMS messaging services.

5.8 In particular, the MCMC notes persuasive evidence that was provided to demonstrate some correlation between rises in popularity of OTT messaging services (e.g. WhatsApp, Viber, etc.) and the broad declines in

SMS volumes and revenues that are being experienced by most Malaysian mobile providers, although direct evidence of this substitution effect has not been provided. The MCMC considers that purported migration from traditional SMS to data-based messaging services somewhat supports claims that these services should be viewed as direct substitutes to be included in the same market.

5.9 The MCMC also notes the continued growth in smartphone penetration rates that has been occurring in Malaysia. The MCMC was originally concerned that mobile phone users who did not have a smartphone would be unable to communicate via text message with users of the various OTT messaging applications. However, a significant majority of Malaysians now have, or are likely to have in the near future, a smartphone to enable them to access data-based messaging services (e.g. iPhone-to-iPhone messages, WhatsApp, etc.).

5.10 It is also worth noting why the MCMC has included OTT-based services in the market for SMS messaging but not in the market for mobile telephony. For many smartphone users, data-based messaging is now done automatically (e.g. iPhone-to-iPhone messages) or is actively done by the user over a popular OTT messaging application (e.g. WhatsApp, Viber, etc.) in an effort to avoid SMS charges. This helps explain to some degree the declines in SMS revenue that have been seen in recent years. However, similar drastic declines in mobile calls have not yet been experienced due to OTT telephony services, such as Skype or Viber. These OTT telephony services are "free" for users of the service, but they tend to charge similar telephony rates if a user "calls out" of the application to a phone over the mobile voice network.

5.11 As mentioned above, the MCMC also proposes to amend the functional level of the mobile messaging market to apply only at the retail level. MNOs and MVNOs contract directly with subscribers at the retail level to provide access to both mobile and data-based messaging services. At the wholesale functional levels, MVNOs and resellers generally acquire telephony and messaging services as a bundle and hence the MCMC considers that there is a combined wholesale mobile telephony and messaging market. Further, as discussed in section 15 below, the MCMC continues to apply a separate market for wholesale termination of SMS. As such, a separate wholesale market for messaging services is not necessary.

5.12 Therefore, for the reasons stated above, the MCMC now considers that there is a national retail market for mobile messaging services, which includes both SMS and OTT messaging services.

Assessment of dominance

Market structure and nature of competition

5.13 Traditional mobile messaging services, such as SMS, are provided using spare capacity in the mobile network reserved for voice signalling. In

contrast, multimedia messaging services (**MMS**) are provided using the non-voice capacity set aside for mobile data communications.

5.14 The MCMC notes that the growth in mobile internet access has led to a corresponding explosion in uptake for messaging services in its various forms. Social messaging websites and applications ("apps") such as Facebook chat, Skype message, Whatsapp and Viber (to name only a few) are putting pressure on mobile operators as these data-based services allow users to avoid paying formerly-lucrative SMS charges.

5.15 As discussed above, the MCMC now considers both forms of messaging services (i.e. SMS/MMS and data-based OTT services) as substitutes. The focus of the following discussion is on competition in the retail market which includes both SMS and data-based messaging services.

5.16 The MCMC notes that because messaging services are provided over the mobile network, many of the issues discussed above in relation to mobile telephony and broadband and data services also apply for mobile messaging services (e.g. general capability to offer nationwide mobile network coverage, growing number of MVNO providers, low barriers to entry, etc.).

Activity in the SMS messaging market

5.17 The MCMC considers the growing number of new entrants into the mobile sector as a significant indicator that the market for SMS messaging is likely to be competitive. Consumers now have a variety of alternative MNOs and MVNOs to choose from, each of which may target a particular customer segment with offers that are tailored to their particular needs. For example, many MVNOs now target youths or low-value customers with mobile plans that include discounted or bundled SMS messages.

5.18 Support for this position may be seen in the improving mobile plans that are now being offered by a large number of MNOs, MVNOs and WiMAX providers. Examples of the types of SMS offers that are now available include:

(a) U Mobile offers 100 on-net and 200 off-net free SMS messages as part of their U28 postpaid plan;

(b) DiGi offers between 200 and 450 free SMS messages depending on the Postpaid Plus Plan that is selected;

(c) Celcom offers 3,000 free SMS messages for a principle and any supplemental lines, as well as cheap SMS rates to 'other numbers' as part of its Celcom First Voice postpaid plan; and

(d) Maxis offers 200 free SMS message as part of its TextMore 28 Plan.[108]

[108] Market Data collected by MCMC.

5.19 SMS messaging services now appear to be used as part of larger bundled offerings to attract or retain customers. The increased competition in the SMS market seems to have contributed to a significant decline in the pricing of SMS messaging services to the benefit of consumers.

5.20 For these reasons, the MCMC considers the mobile messaging market to be relatively competitive, whereby no single operator appears capable of dominating the market at the moment.

Competition from OTT messaging services

5.21 The MCMC also notes the competitive constraint that OTT messaging services are placing on traditional SMS volumes and revenues in Malaysia.

5.22 DiGi claimed that its own SMS revenues fell 19.1% from 2013 to 2014, and that it continues to see a drop of 6.3% quarter-on-quarter. Similarly, the operator also reports that two of its main rivals have seen SMS revenue declines of:[109]

(a) 3% of total revenue year-on-year; and

(b) 12% year-on-year of SMS revenue only.

5.23 The MCMC notes that these broad declines in SMS volumes and revenues that are being experienced by most Malaysian mobile providers are coincident on the growing popularity of OTT messaging services (e.g. WhatsApp, Viber, etc.).

5.24 Further, the MCMC also notes the continued growth in penetration rates of smartphones and, to a lesser extent tablet, in Malaysia. As noted above, smartphone penetration in Malaysia is reported to have increased from 47% in 2012 to 63% in 2013 (and is likely to continue rising in the future).[110] This is significant because data-based messaging services require a smartphone (with the relevant application downloaded onto that smartphone) in order to operate.

5.25 Therefore, the MCMC considers that the growing take-up of smartphones and use of OTT messaging services by Malaysian consumers is likely to provide further competitive pressure to prevent a single operator from gaining any significant market power in the mobile messaging market.

Preliminary finding on dominance

5.26 The MCMC is of the preliminary view that the retail market for mobile messaging service is relatively competitive and that no single operator is in a dominant position within the market at this time.

[109] See: Digi response to MCMC informal consultation at page 14, taken from DiGi's 1Q2014 results.
[110] The Star, Smartphone penetration hits 63% in Malaysia (12 September 2013) available online at:< http://www.thestar.com.my/Tech/Tech-News/2013/09/12/Smartphone-and-tablet-penetration-hits-63-percent.aspx/>

Question 5

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you have any data to support a calculation of market share?
(c) Are there any additional competition issues that the MCMC should consider before making its final determination on dominance?
(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

6 Transmission (inter-exchange)

Market overview

6.1 Inter-exchange transmission is often referred to as the backbone network. Backbone networks may be provided using a range of different physical technologies, but are principally fibre based and, in some areas, microwave.

6.2 The total distance of fibre optic links across Malaysia is estimated at approximately [c-i-c] km. The major fibre optic providers are Telekom Malaysia, TT dotcom, Fiberail and FibreComm.[111]

6.3 In Peninsular Malaysia, there are approximately 1,017 exchanges and 95 HSBB exchanges in place. In Sabah Sarawak, there are approximately 150 exchanges and 8 HSBB exchanges.[112]

6.4 The owners of backbone networks in Malaysia who make available inter-exchange transmission to third parties includes:

(a) Telekom Malaysia owns an extensive backbone network across Peninsular Malaysia, across to East Malaysia and within East Malaysia itself;

(b) TT dotCom owns and operates a national fibre optic backbone network in Peninsular Malaysia;

(c) Fiberail has a backbone network within Peninsular Malaysia along the major rail, road and pipeline corridors;

(d) FibreComm has a backbone network throughout Peninsular Malaysia and Sabah;

(e) Maxis has some terrestrial fibre backbone network in Peninsular Malaysia;

[111] MCMC, *Fibre optic site & link 2014 stock take for Peninsular Malaysia and Sabah Sarawak.*
[112] MCMC, *Fibre optic site & link 2014 stock take for Peninsular Malaysia and Sabah Sarawak and Report by Telekom Malaysia to MCMC.*

(f) Celcom Timur has a relatively extensive backbone network in East Malaysia; and

(g) Jaring has some backbone network infrastructure in Peninsular and East Malaysia and across to East Malaysia.

6.5 Not all operators who own backbone networks make available their backbone networks for third party use (i.e. they are used for internal network purposes only). In addition, some licensees make available inter-exchange transmission over backbone networks in more localised areas, such as Sacofa in Sarawak.

6.6 'Transmission Service' is currently included on the Access List.

Summary of submissions on market definition

Transmission from Peninsular Malaysia to East Malaysia

6.7 Several operators support the definition of a separate geographic market for the transmission route from Peninsular Malaysia to East Malaysia. One fixed network operator claims that by regulating the transmission price between Peninsular and East Malaysia, the MCMC has already recognised this geographic area as a separate market for transmission routes.

6.8 A prominent mobile operator also notes that from the demand side, the contracts are typically longer term on this route (e.g. 10 years in comparison to annual contracts for Peninsular terrestrial fibre transmission) and in view of the longer tenure, operators typically purchase and dimension larger capacities in their contractual arrangements on this route.

6.9 However, a mobile network operator takes a contrary view and notes that there is currently not enough evidence to suggest that a separate and distinct geographical market exists for the route between Peninsular Malaysia to East Malaysia, although the operator does agree with MCMC's observations that there would be a limited number of service providers able to supply such services.

Route-by-route versus national market for inter-exchange transmission

6.10 A fixed network operator supports route-by-route markets for inter-exchange transmission, rather than a national market. The reasons given to support this view include:

(a) increased competition in Peninsular Malaysia, intra-Sabah and intra-Sarawak routes particularly the growing offerings of East Malaysia operators Sacofa and Celcom Timur;

(b) customers typically acquire transmission capacity from a number of different sources on a point-to-point basis (with some exceptions) and do not acquire services on a national basis; and

(c) the recent decision by the ACCC to de-list transmission services in 120 geographic areas supports a route-based market.

6.11 Another fixed network operator claims to make its commercial decisions for inter-exchange transmission based on inter-region and intra-region markets, rather than on a national market.

6.12 A prominent mobile operator disagrees and prefers a national market instead. The operator notes that its requirements for inter-exchange transmission are often in the gigabit speed bandwidth ranges and these are sold by wholesale bandwidth suppliers as distance-independent products. Increasingly, these wholesale bandwidth suppliers arrange for a 'bundled package' consisting of a connectivity solution for clusters of geographical locations.

Other substitutes for fibre-based transmission

6.13 Two respondents believe that microwave technologies should be considered substitutes for fibre-based transmission, with one operator noting that this would align with a technology-neutral approach. Microwave technologies are often used as a substitute where fibre capacity is not available, such as in remote areas.

6.14 However, most other licensees disagree and claim that fibre and microwave based services are not substitutes as microwave services cannot support a similar number of downstream services. Further, on the supply side, one mobile provider notes that due to differences in costs, technology and investment decisions it is unlikely that a microwave network provider would be able to easily replicate a fibre network.

MCMC findings on market definition

Transmission from Peninsular Malaysia to East Malaysia

6.15 The MCMC notes that most licensees appear to support a separate geographic market for the inter-exchange transmission route from Peninsular Malaysia to East Malaysia.

6.16 One licensee does not view there to be enough evidence to support such a market. However, the MCMC considers that, given the arguments set out in the Market Definition Analysis[113] and the additional evidence provided by licensees (e.g. longer term contracts to dimension larger capacity), it is necessary to define a separate market for the route from Peninsular Malaysia to East Malaysia.

[113] See: discussion on "Inter-exchange transmission between Peninsular Malaysia and East Malaysia" under section 4 of Part B of Market Definition Analysis.

Route-by-route versus national market for intra-exchange transmission

6.17 In the Market Definition Analysis, the MCMC sought feedback on whether licensees thought that the market for inter-exchange transmission should be defined on a route-by-route or national basis.

6.18 The MCMC received a mixed response on this issue from licensees. Those in favour of applying a route-by-route or some other form of sub-national market (e.g. intra- and inter-regional markets) claimed that commercial decisions were often based on regional factors (e.g. level of competition along particular routes). They also noted that customers do not necessarily acquire transmission services on a national basis.

6.19 On the other hand, a prominent mobile operator supported a national market for inter-exchange transmission noting that transmission services were regularly offered as a "bundle" of geographic clusters.

6.20 Ultimately, the MCMC considers that a national market should apply. Although transmission is often acquired on a point-to-point basis, the method of aggregation of such services appears to be on a "bundled" transmission services basis to enable end-to-end connectivity. This suggests that commercial decisions are made on a national basis. However, the MCMC notes that it will continue to consider the competitiveness of particular routes on a case-by-case basis, which is broadly in line with the approach taken in Australia by the ACCC.

Other substitutes for fibre-based transmission

6.21 The MCMC notes that other technologies (e.g. microwave) may be used to substitute fibre-based transmission services in certain areas. For example, wireless transmission may be required in remote or regional areas where fibre is unavailable. However, inter-exchange transmission largely occurs over long distances and access seekers are likely to have a preference for fibre-based transmission where it is available.

6.22 Furthermore, the MCMC is aware that LTE services in the mobile sector are data-hungry and that fibre connectivity to base stations is important. Microwave connectivity is not sufficient for this purpose.

6.23 Therefore, the MCMC does not propose to include other substitutes for fibre in the market for inter-exchange transmission at this time. The MCMC notes that this position was also supported by the majority of respondents.

MCMC findings on market for inter-exchange transmission

6.24 In summary, the MCMC considers there to be:

(a) a wholesale national market for inter-exchange transmission;

(b) a separate geographic market for the route from Peninsular Malaysia to East Malaysia; and

(c) only fibre transmission service will be considered as forming part of this market when considering dominance.

6.25 The MCMC may consider excluding any transmission routes that are found to be competitive, which will be assessed on a route-by-route basis.

Assessment of dominance

Distribution of infrastructure ownership

6.26 Based on available network data for the main providers of inter-exchange transmission in Malaysia, the MCMC notes the breakdown of infrastructure ownership as set out in Figures 5 and 6 below.

Figure 5: Fibre optic link total distance by operator

Operator	Total length (KM)	Percentage of total link distance
TM	[c-i-c]	88.9%
CELCOM	[c-i-c]	0.99%
DIGI	[c-i-c]	0.10%
MAXIS	[c-i-c]	1.67%
FIBRECOMM	[c-i-c]	1.64%
FIBERAIL	[c-i-c]	1.56%
TT DOT COM	[c-i-c]	1.96%
ESAJADI	[c-i-c]	0.11%
CELCOM TIMUR	[c-i-c]	2.27%
SYMPHONET	[c-i-c]	0.02%
SACOFA	[c-i-c]	0.21%
OCE	[c-i-c]	0.22%
SEDCO	[c-i-c]	0.27%
ABN	[c-i-c]	0.08%
TOTAL	[c-i-c]	100%

(Source: Data provided to MCMC by various operators)

6.27 Figure 5 illustrates the distribution of fibre optic ownership by the leading Malaysian fixed-line operators. The MCMC notes that there has been a considerable lack of investment by licensees, particularly mobile operators, in backhaul infrastructure. While this data is incomplete, as a result of this lack of investment Telekom Malaysia continues to have more network coverage (roughly 89% of the total link distance) than its competitors.

Figure 6: Operator exchange summary by state

State	Operator							Total
	CELCOM	DIGI	FIBERAIL	TM	TT DOT COM	MAXIS	JARING	
Johor	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]			**193**
Kedah	[c-i-c]		[c-i-c]	[c-i-c]				**67**
Kelantan	[c-i-c]		[c-i-c]	[c-i-c]				**38**
Melaka	[c-i-c]			[c-i-c]				**34**
Negeri Sembilan		[c-i-c]	[c-i-c]	[c-i-c]		[c-i-c]		**72**
Pahang	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]				**83**
Perak	[c-i-c]	[c-i-c]		[c-i-c]				**96**
Perlis				[c-i-c]				**10**
Pulau Pinang	[c-i-c]	[c-i-c]		[c-i-c]	[c-i-c]			**42**
Sabah	[c-i-c]	[c-i-c]		[c-i-c]	[c-i-c]			**70**
Sarawak	[c-i-c]	[c-i-c]		[c-i-c]	[c-i-c]			**80**
Selangor	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]		**253**
Terengganu				[c-i-c]				**34**
Wilayah Persekutuan Kuala Lumpur	[c-i-c]			[c-i-c]		[c-i-c]	[c-i-c]	**93**
Wilayah Persekutuan Labuan				[c-i-c]				**2**
Total	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	**1167**
% of total exchanges	5.14%	6.51%	2.83%	82.86%	1.46%	1.11%	0.09%	**100%**

(Source: Data provided to MCMC by various operators)

6.28 Similarly, Figure 6 also illustrates the substantial gap in the distribution of infrastructure investment and ownership between Telekom Malaysia and the other fixed-line operators. The MCMC estimates that Telekom Malaysia has substantially invested and hence owns approximately 83% of the total number of exchanges in the country.

6.29 While the distribution of infrastructure ownership may not directly correlate with market share for inter-exchange transmission services, the MCMC considers that the above statistics strongly indicate that due to Telecom Malaysia's investment and the lack of investment by its rivals, Telekom Malaysia is in a dominant position in the national market for inter-exchange transmission.

6.30 However, as discussed in the Market Definition Analysis,[114] the MCMC may consider making separate dominance assessments along certain transmission routes that are found to be more competitive. Such an assessment will be considered on a route-by-route basis.

[114] See discussion on the geographic dimension of inter-exchange transmission markets under section 4 of Part B of Market Definition Analysis.

Market structure and the nature of competition

6.31 Most network operators tend to have a regional focus (e.g. state-based operators, operators that target particular commercial centres, etc.). However, the most extensive national backbone network (including inter-exchange transmission between Peninsular Malaysia and East Malaysia) belongs to Telekom Malaysia.

6.32 The MCMC notes that Telekom Malaysia's significant investment in backbone network also gives it advantages in downstream markets that are not available to its competitors. For example, the number of exchange locations offered by Telekom Malaysia to points across the country is likely to make the operator the leading choice by access seekers.

6.33 Further, the MCMC also notes that the scale advantages achieved by Telekom Malaysia due to the size of its investment in backbone network also appear to have afforded it a particularly high market share in certain sub-national areas. For example, Telekom Malaysia has [c-i-c] fibre optic sites in Putrajaya, while its four competitors in the area have a combined [c-i-c] fibre sites between them.[115] This is a particularly high level of market share in a populated region that the MCMC would expect to otherwise be considered to be contestable and could be subject to further investment by rivals.

6.34 Apart from this lack of investment, another possible explanation for Telekom Malaysia's strong presence in Putrajaya is its ability to translate its scale advantages into agreements with local authorities. A rival service provider gave the example of Telekom Malaysia teaming up with Putrajaya Corporation to prevent other licensees from laying basic infrastructure (e.g. ducts, poles, cables, etc.) within the area of Putrajaya.[116] These types of arrangements can be seriously detrimental to competition and are likely to explain Telekom Malaysia's particularly high market share in certain sub-national areas (in addition to its dominant position at the national level).

6.35 The MCMC notes that terms of access are regulated by the access regulation. However, the existence of access regulation alone will not prevent a licensee from being dominant if access regulation does not provide an effective constraint on the ability of a licensee to act independently in a market. For example, although Telekom Malaysia is subject to regulated access pricing, it may still have the ability to act independently in the market by restricting access to its extensive backbone network through other means, such as implementation of delivery timeframes.

6.36 In certain circumstances, the MCMC may consider the possibility of transmission along a particular route being supplied by an alternative, more indirect, route. For example, if direct access to inter-exchange transmission between Johor Bahru and Kuala Lumpur is prohibitive, it may be possible to

[115] MCMC, *Fibre optic site & link 2014 stock take for Peninsular Malaysia and Sabah Sarawak*.
[116] Operator Questionnaire Response at 3.3.

access an alternative supply by means of a less direct route on another operator's network (e.g. by acquiring transmission service via Singapore). However, the MCMC's preferred view is to consider direct port-to-port routes.

6.37 If the MCMC makes a finding of dominance in the national market for inter-exchange transmission, when considering conduct under section 139 the MCMC will continue to take into account whether competition exists on a particular route which may reduce the anti-competitive effect of alleged anti-competitive conduct. That is, the ability of acquirers of inter-exchange transmission to switch to alternative suppliers of inter-exchange transmission on a particular route following an attempt by one particular supplier to engage in anti-competitive conduct will be taken into account by the MCMC when determining whether or not to intervene under section 139. However, if that route is usually acquired in a bundle with other "non-competitive" routes, then the MCMC may not consider that this competitive constraint is sufficient.

Inter-exchange transmission between Peninsular Malaysia and East Malaysia

6.38 In addition to the above analysis, it is also necessary to make an assessment of dominance in the separate market for inter-exchange transmission between Peninsular Malaysia and East Malaysia that was identified by the MCMC in the Market Definition Analysis.[117]

6.39 Telekom Malaysia appears to be the principal provider of transit services between East and West Malaysia. Again, there has been a distinct lack of investment by rivals on this route. The MCMC considers Telekom Malaysia to be in a dominant position in the market for inter-exchange transmission between Peninsular Malaysia and East Malaysia.

6.40 This position is supported by a submission that was made by a prominent mobile provider, which noted that inter East-West Malaysia traffic costs were high due to the high submarine costs being imposed by Telekom Malaysia. The said mobile operator attributed the lack of new entrants in the market and poor expansion into East Malaysia to the high cost of transmission via submarine cables.[118]

[117] See discussion on 'Inter-exchange transmission between Peninsular Malaysia and East Malaysia' under section 4 of Part B of Market Definition Analysis.
[118] Response by a mobile operator to MCMC Questionnaire at 2.2(e).

Corporate groups and related companies

6.41 The MCMC takes a broad view of the meaning of "licensee" for the purposes of section 137 of the CMA so that a licensee is responsible for any intra-company arrangements within the licensee's group of companies. The MCMC takes into account all of the licensee's group companies for the purposes of determining dominance and a determination that a licensee is in a dominant position will apply to all of the licensee's group companies.

6.42 This approach is similar to the approach taken in the EU. A parent company and any subsidiaries over which the parent exercises "decisive influence" are deemed to be part of the same undertaking for the purposes of the EU competition rules.

6.43 The MCMC notes that Telekom Malaysia has a majority stake in two other prominent Malaysian fixed-line operators:

(a) Fiberail Sdn Bhd: 54%; and

(b) Fibrecomm Network (M) Sdn Bhd: 51%.[119]

6.44 The MCMC will consider Telekom Malaysia's position in the market in aggregate with Fibrerail and Fibrecomm when making a dominance assessment for the inter-exchange transmission markets.

6.45 Therefore, unless evidence is provided to show that the providers should be viewed as separate entities, the MCMC's preliminary view is that Telekom Malaysia, Fibrerail and Fibrecomm collectively have significant market power in the inter-exchange transmission market.

Barriers to entry

6.46 The MCMC considers the market for inter-exchange transmission to be subject to relatively high barriers to entry or expansion for the following reasons:

(a) Infrastructure costs. Entry or expansion in the market for inter-exchange transmission requires significant capital and construction costs (which are largely sunk costs) to build additional capacity along the backbone network. This position was supported by various fixed-line service providers. However, the MCMC notes that even where investment by mobile operators could be justified, there has been an over-reliance on Telekom Malaysia's infrastructure and a consequent lack of investment. In some cases it will not make financial sense to duplicate existing infrastructure, particularly where demand for transmission services may be limited (e.g. East Malaysia).

(b) Access to facilities and inputs. As discussed above, in some regions some of the larger licensees may have preferential relationships

[119] Telekom Malaysia, *Annual Report 2012* at page 66.

with local authorities and building managers which can dissuade a potential competitor from entering the market as they would not be able to offer end-to-end connectivity in those regions.

(c) Economies of scale and scope. As discussed above, due to the size of its network, Telekom Malaysia may be able to achieve economies of scale and scope which are not available to its competitors. This can present certain advantages (e.g. comprehensive point-to-point connectivity, etc.) which may deter investment in the market by existing or potential competitors.

6.47 The MCMC also notes the following unique factors which may present additional barriers to entry into the separate market for inter-exchange transmission between Peninsular Malaysia and East Malaysia:

(a) particular expertise is required to deploy submarine cable capacity which differs from land-based transmission (e.g. construct or lease access to cable landing stations, utilise cable laying ships, specialised thick underwater cables, etc.); and

(b) there are likely to be additional sunk costs associated with deploying submarine cable capacity, which may be particularly difficult to justify given that there is not likely to be sufficient demand in East Malaysia to warrant a duplication of existing infrastructure.

6.48 Finally, the MCMC notes that the 'Transmission Service' is included on the amended Access List. The MCMC welcomes any further comments from access seekers on the effectiveness of the current Access List in preventing anti-competitive outcomes in relation to the 'Transmission Service'.

Preliminary finding on dominance

6.49 The MCMC's preliminary view is that Telekom Malaysia is dominant in the national market for inter-exchange transmission. However, the MCMC may consider making an alternate finding on dominance for particular inter-exchange transmission routes that are found to be competitive, which will be assessed on a route-by-route basis.

6.50 The MCMC considers Telekom Malaysia to be dominant in the separate market for inter-exchange transmission between Peninsular Malaysia and East Malaysia.

6.51 The MCMC will consider Telekom Malaysia's position in the market in aggregate with Fibrerail and Fibrecomm when making a dominance assessment for the inter-exchange transmission markets. Therefore, unless evidence is provided to the contrary, the MCMC's preliminary view is that Telekom Malaysia, Fibrerail and Fibrecomm collectively are dominant in the inter-exchange transmission market.

6.52 The MCMC welcomes comments on the effectiveness of the current Access List in preventing anti-competitive outcomes in relation to the 'Transmission Service'.

Question 6

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you have any data to support a calculation of market share?
(c) Do you believe that the access regulation has been effective in preventing anti-competitive conduct from occurring in the inter-exchange transmission market?
(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?
(e) Should the MCMC make a non-dominance finding if high market share is the result of lack of investment by rivals, depending on the barriers to entry in this market?

7 Transmission (tails) or local leased lines

Market overview

7.1 Tail transmission services are currently offered in Malaysia by various network operators.

7.2 The largest network operator is Telekom Malaysia, which offers both wholesale and retail products for tail transmission services. Telekom Malaysia describes its retail 'Digital Leased Line' product as a point-to-point connection that allows for:

(a) private networking solutions with speed of data transmission from 64 kbps up to 155 Mbps;

(b) managed 24 x 7 using a centralised Integrated Network Management System; and

(c) extensive nationwide network coverage.[120]

7.3 In its access reference document, Telekom Malaysia describes its wholesale local leased circuit as a facility and/or service for the carriage of communications by way of a private circuit between a point of interconnection and an end user, available only at one end of a private circuit, which comprises transmission (whether packet or circuit) at such transmission rates as may be agreed between Telekom Malaysia and the access seeker on a permanent or virtual basis.[121]

[120] Telekom Malaysia, *Digital Leased Line Brochure* available online at: < https://www.tm.com.my/Office/Business/Enterprise/DataServices/DigitalLeasedLine/Documents/Digital%20Leased%20Line%20-Wideband%20Brochure.pdf>
[121] Telekom Malaysia Berhad's Access Reference Document at Part XI of Schedule A.

7.4 Providers of tail transmission or local leased circuits in Malaysia also include TT dotCom, Maxis and Sacofa (in Sarawak).

7.5 Wholesale Local Leased Circuit Service (previously known as Private Circuit Completion Service) was added to the Access List in 2001.

Summary of submissions on market definition

7.6 One operator notes that, as fixed and wireless substitutes are not discussed in relation to the tail transmission market, it is assumed that both technologies are in the same market.

7.7 Various operators provided input on potential substitutes for tail transmission, including:

(a) HSSB as a substitute. It is technically possible to substitute HSBB for tail transmission, but it will not be the same as a fully dedicated leased line. The pricing will also differ as the costs for HSBB are shared by all users, whereas for tail transmission it is dedicated to the respective customer. This position is supported by several licensees.

(b) Wireless substitutes. Fixed networks are increasingly being augmented with wireless infrastructure, especially in areas where geography or topography makes fixed infrastructure more difficult. As higher speeds are achievable for wireless solutions, there may be advantages for using the same transport technology end-to-end to gain synergy and reduce costs. For example, one licensee notes that WiMAX may be used to enable 'last mile' delivery of broadband access, so it should be considered a substitute for tail transmission. However, ultimately most licensees agree that fixed wireless substitutes are not adequate substitutes for fibre-based transmission lines due to differences in service features and pricing. For example, microwave connectivity to base stations is not likely to be sufficient to satisfy data-hungry LTE services.

7.8 One operator submits that the transmission capacity market should not be a national market. Access to remote and inaccessible towers can only be supplied by a few operators versus many operators in urban areas so an exception should be made in these circumstances.

MCMC findings on market definition

HSBB as a substitute for tail transmission

7.9 The MCMC notes that most operators do not view HSBB as a viable substitute for tail transmission service. While it may be technically possible to use the HSBB network instead of a LLC, the pricing and transmission capabilities offered by a dedicated leased line are quite different. Therefore, the MCMC does not consider HSBB to be a realistic substitute for tail transmission.

Wireless substitutes for fibre-based transmission

7.10 One operator put forward its assumption that other substitutes (e.g. wireless) for fibre-based transmission would be included in the market for tail transmission. Some licensees have also noted that fixed networks are increasingly being augmented with wireless infrastructure, especially in areas where geography or topography makes fixed infrastructure more difficult.

7.11 The MCMC accepts that wireless technologies have improved in recent years and that these technologies are increasingly being used to augment fibre-based networks in certain areas. However, the MCMC continues to view wireless options as a complement to the primary fibre network. The MCMC agrees with the licensees who note that, based on the service features and pricing that is currently offered, access seekers continue to have a preference for fibre transmission where it is available. For example, data-hungry LTE services in the mobile sector typically require fibre connectivity to base stations as microwave connectivity is not sufficient for this purpose.

7.12 For these reasons, the MCMC proposes to exclude wireless transmission alternatives from the market for tail transmission at this time.

Geographic dimension of tail transmission market

7.13 One licensee disagreed with the MCMC's proposed national market for tail transmission. The licensee notes that access to remote and inaccessible towers can only be supplied by a few operators.

7.14 For the reasons set out in the Market Definition Analysis,[122] the MCMC proposes to continue to apply a national market for tail transmission. However, the MCMC notes that it will consider making an exception in certain limited circumstances, such as in relation to access to remote or inaccessible cable landing stations and earth stations.

MCMC findings on market for inter-exchange transmission

7.15 The MCMC has determined that there are separate wholesale and retail markets for tail transmission and that both markets operate at a national level, subject to where certain limited exceptions are found to apply (e.g. transmission to particularly remote operating cable landing stations and earth stations).

7.16 The MCMC does not consider that ULLs or HSBB services are product substitutes for tail transmission at this time.

[122] See: discussion on 'Geographic dimension' under section 5 of Part B of Market Definition Analysis.

Assessment of dominance

Market share and distribution of infrastructure

7.17 The MCMC notes that various operators have placed Telekom Malaysia's market share at over 90% of the fixed-line market more generally.[123]

7.18 Sacofa has estimated that its own market share in Sarawak is approximately 30% at the wholesale level (only).[124]

7.19 As of 1 January 2011, service providers reported having the following leased circuit services in operation:

[123] Maxis Questionnaire Response at 2.1.
[124] Sacofa Questionnaire Response at 2.1(b).

Figure 7: All operator leased circuits – services in operation by region in 2011

No	Service	Northern	Central	Southern	Eastern	Sabah	Sarawak
		Ends	Ends	Ends	Ends	Ends	Ends
Retail							
1.	64 kb/s leased circuits	329	1053	252	92	24	101
2.	2 Mb/s leased circuits	261	1644	181	110	37	58
3.	34 Mb/s leased circuits	5	45	7	5	1	3
4.	155 Mb/s leased circuit	19	60	32	1	0	0
5.	622 Mb/s leased circuit	4	4	0	0	0	0
6.	2.5 Gb/s leased circuit	4	121	0	0	0	0
7.	Ethernet (10 Mb/s) leased circuit	340	2172	278	113	64	104
8.	Fast Ethernet (100 Mb/s) leased circuit	75	295	60	37	5	4
9.	Gigabit Ethernet leased circuit	4	72	3	2	0	0
Wholesale							
10.	64 kb/s leased circuits	16	290	21	2	0	8
11.	2 Mb/s leased circuits	390	987	137	23	134	67
12.	34 Mb/s leased circuits	6	14	13	3	2	73
13.	155 Mb/s leased circuit	53	73	55	15	2	71
14.	622 Mb/s leased circuit	27	42	39	1	0	8
15.	2.5 Gb/s leased circuit	25	1	19	0	0	0
16.	Ethernet (10 Mb/s) leased circuit	41	1060	15	21	0	2
17.	Fast Ethernet (100 Mb/s) leased circuit	63	198	39	17	0	1
18.	Gigabit Ethernet leased circuit	2	36	2	2	0	0

(Source: Data reported to the MCMC by service providers)

7.20 While the above table does provide breakdown by service providers, information available to MCMC indicates that Telekom Malaysia has again made the most significant investment in tail infrastructure and hence provides a large proportion of the total leased circuits in operation. While the distribution of infrastructure ownership may not directly correlate with

market share for tail transmission services, the MCMC considers that the above statistics indicate that Telekom Malaysia is in a dominant position in the national market for tail transmission as a result of this lack of investment.

National tail transmission network coverage

7.21 Telekom Malaysia's main competitors in the tail transmission market are TT dotCom, Maxis and Sacofa. Each of these providers have their own network with varying regional coverage as follows:

(a) TT dotcom and Maxis report that their respective fixed-line networks primarily serve only the three major market centres of Klang Valley (including Kuala Lumpur), Johor Bharu and Penang.[125]

(b) Sacofa is mandated by Sarawak State Government and, as such, its wholesale-only services are largely centred in and around the Sarawak region. However, within this region, the operator has a relatively strong presence. Sacofa claims to operate an on-land fibre optic network that spans from Kuching to Miri (approx. 3,000km) as well as a submarine cable system that runs from Buntal, Kuching to Mersing, Johor (approx. 1,000km).[126]

7.22 Outside of these areas, operators acquire wholesale access to leased lines from other licensees in order to reach end users in regions where they do not have their own fixed-line network. For most regional or smaller urban areas the default wholesale provider of leased lines tends to be Telekom Malaysia due to its extensive network coverage. However, the MCMC notes that Sacofa also provides a competitive wholesale offering in the state of Sarawak where it has relatively extensive network coverage.

7.23 The MCMC notes that the ability to offer transmission services across all parts of the country is a key capability that service providers must be able to offer in order to effectively compete for customers in the tail transmission market. A fixed network operator noted that its lack of coverage in the 'last mile' in smaller cities outside of the major business centres was of continuing concern. In particular, the operator cited its inability to provide point-to-point connectivity to large business and government customers across the country as an impediment to its ability to compete in the national market. The operator also claimed that Telekom Malaysia was typically the only operator able to provide services in these areas.[127]

7.24 The wholesale leased circuit data provided to MCMC appears to support these claims. In particular, the number of wholesale leased circuits provided by Telekom Malaysia in Sabah region [c-i-c] seems disproportionately high when compared to the number of leased circuits in

[125] TT dotCom Questionnaire Response at 1.2(d)ii) and Maxis Questionnaire Response at 1.3(a).
[126] Sacofa Questionnaire Response at 1.1.
[127] Fixed network operator Questionnaire Response at 1.8.

the Northern [c-i-c], Central [c-i-c] and Sarawak [c-i-c] regions. While the figures for Northern and Central Malaysia are higher, this is to be expected given the major business and population centres in these regions (i.e. Kuala Lumpur and Penang). Similarly, a greater number of leased circuits would be expected in Sabah over Sarawak due to differences in population. However, the magnitude of difference seems to suggest a degree of dominance by Telekom Malaysia in Sabah region where it faces less competition from other operators (unlike Sarawak where Sacofa has a strong network presence at the wholesale level).

7.25 This reliance on the incumbent's network would appear to give Telekom Malaysia significant market power outside of the major population centres (e.g. Sabah, Eastern Malaysia, etc.) as its main competitors are required to rely on its price and terms of access.

Tail transmission pricing

7.26 Telekom Malaysia is generally viewed as a price leader in the fixed wholesale market by its competitors.[128] Price leadership does not necessarily equate with dominance. However, it is often a strategy used by the largest firm in the market to set prices in such a way as to maximise self-profit while putting pressure on smaller competitors to follow their preferred pricing.[129] One competitor of Telekom Malaysia noted that the price of its private leased line services had become unsustainably low in order to retain customers and arrest churn.[130]

7.27 One explanation for the recent drop in leased line pricing could be Telekom Malaysia's vertical integration and its willingness to offer discounts in adjoining markets where an end user orders multiple transmission services at once. For example, a rival leased line provider claims that Telekom Malaysia regularly offers 30% to 60% discounts when a customer tenders for alternative services.[131]

Ability to access end users

7.28 The MCMC also notes that Telekom Malaysia's strong presence across regional areas provides it with an advantage across the national market by offering the most comprehensive point-to-point connectivity capabilities across the country. Even where particular transmission routes may appear to be competitive, alternative providers are only able to provide a point-to-point service by combining with a Telekom Malaysia tail-end service.

7.29 Similarly, building access to support tail transmission is an issue that was raised by multiple operators. The inability to reach end user premises limits an operator's ability to realise full end-to-end transmission. This may occur where the provider is unable to reach agreement with building management or the local council (e.g. for access to ducts, manholes, etc.).

[128] For example, see: Operator Questionnaire Response at 2.1(d).
[129] D N Dwivedi, 'Microeconomics: Theory and Applications' (2002) *Pearson Education* 407.
[130] Operator Questionnaire Response at 1.12(e).
[131] Operator Questionnaire Response at 1.5.

For example, one provider gave the example of other licensees reaching exclusivity agreements with local authorities or developers which prevented that provider from installing its own physical infrastructure to reach end user premises.[132]

Vertical integration and wholesale access issues

7.30 The MCMC notes that the scale advantages achieved by Telekom Malaysia due to the size of its network footprint compared to its competitors may serve to limit investment by competitors. The MCMC is of the view that mobile operators could do more to invest in tail infrastructure. However, the MCMC also acknowledges that at times a larger operator will have an incentive to self-supply to its retail arm on better terms than it offers to its competitors. This is somewhat mitigated by the Access List, but other forms of anti-competitive conduct may still take place that are more difficult to regulate (e.g. informational imbalances, poor support services to other wholesale customers, etc.).

7.31 Multiple operators have also claimed that Telekom Malaysia only applies regulated access prices to certain elements of its end-to-end Transmission Service. For example, the operators claimed that prices for the trunk segment were in compliance with pricing regulation, but that access seekers were often required to pay additional charges for tail and port segments. As a result, the operators noted that access seekers often pay additional costs in the upstream network which impacts pricing in downstream markets.[133]

7.32 The MCMC welcomes further comments from access seekers on the effectiveness of the current Access List in preventing anti-competitive outcomes in relation to the provision of Wholesale Local Leased Circuit Services.

Barriers to entry or expansion

7.33 The tail transmission market tends to be characterised by relatively high barriers to entry or expansion for a number reasons, including:

(a) Infrastructure costs. Entry or expansion in the market for tail transmission requires significant capital and construction costs (which are largely sunk costs). This position was supported by various fixed-line service providers.[134] In addition, in some cases it will not make financial sense to duplicate existing infrastructure. However in many other cases the MCMC notes that investment by rivals should have been made on justifiable grounds.

(b) Access to facilities and inputs. As discussed above, in some regions Telekom Malaysia have preferential relationships with local authorities and building managers which can limit a competitor's

[132] Operator Questionnaire Response at 3.1.
[133] Celcom Questionnaire Response at 3.3 and Maxis Questionnaire Resopnse at 1.7.
[134] For example, see: TT dotCom Questionnaire Response at 2.2(d) and Maxis Questionnaire Response at 2.2.

ability to offer point-to-point connectivity to customers. This lack of access presents a significant barrier to entry or expansion in the market for tail transmission.

(c) Economies of scale and scope. As discussed above, due to the size of its network, Telekom Malaysia may be able to achieve economies of scale and scope which are not available to its competitors. This can present certain advantages (e.g. preferential self-supply of access, comprehensive point-to-point connectivity, etc.) which are likely to deter activity in the market by existing or potential competitors.

7.34 The MCMC considers that the barriers to entry and expansion set out above may enhance Telekom Malaysia's strong position in the market for tail transmission, although some lack of investment is not justified on the grounds of high barriers to entry above.

Preliminary finding on dominance

7.35 The MCMC's preliminary view is that Telekom Malaysia should be considered as dominant in both the wholesale and retail markets for tail transmission.

7.36 The MCMC notes that the Wholesale Local Leased Circuit Service is currently included on the Access List. The MCMC welcomes comments on the effectiveness of the Access List in preventing anti-competitive outcomes in relation to the provision of Wholesale Local Leased Circuit Services.

Question 7

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you agree with the preliminary market share findings?
(c) Do you have any examples of a wholesale tail transmission provider leveraging its position in other markets (e.g. local access services, inter-exchange transmission, etc.) to negatively affect competition in the tail transmission market?
(d) Do you believe that the access regulation has been effective in preventing anti-competitive conduct from occurring in the inter-exchange transmission market?
(e) Do you agree or disagree with the MCMC's preliminary finding on dominance?
(f) Should the MCMC make a non-dominance finding if the market share is the result of lack of investment by rivals, depending on the barriers to entry in this market?

8 Domestic managed data services

Market overview

8.1 Local managed data services are highly managed data services provided using technologies such as frame relay, ATM, IP-VPN and Metro-Ethernet services. They may be provided domestically or internationally. International managed data services are described in section 9 of Part B below.

8.2 Domestic managed data services are currently offered by a number of providers in Malaysia. Some examples include:

(a) Telekom Malaysia provides an IP-VPN service which may be ordered as a 'premier', 'classic' or 'lite' service. Telekom Malaysia also offers a 'Metro-E' product, which it promotes as offering customers high speed and high scalability over a managed network.

(b) Maxis offers a Metro-Ethernet product which it claims has data speeds of approximately 6 Mbps to 1 Gbps. Fiberail claims that its own Metro Ethernet service offers speeds of between approximately 1 Mbps to 10 Gbps.

(c) Jaring offers a 'Network Enhancer' product which allows customers to view, manage and optimise bandwidth usage to improve network efficiency. Jaring also offers a Virtual Private Network service that emphasises network security, which it appears to target at its corporate customers.

(d) FibreComm offers an Ethernet Private Leased Circuit service, as well as a Domestic Private Leased Circuit service.

Summary of submissions on market definition

8.3 A prominent fixed network operator submits that local managed data services should not form a separate market, but should be included within the market for tail transmission.

8.4 Another operator notes that tail transmission or LLCs are usually provided as an essential input to the provision of local managed data services. Therefore, the operator considers that these services should be included within the market for tail transmission services.

8.5 On the other hand, several licensees disagree and support the MCMC's proposed separation of managed data services and tail transmission services. For one, the focus of managed data services is not purely on transmission, but on managed aspects of the transmission service (e.g. quality of service). In addition, a licensee notes that it is important to separate local managed data services from tail transmission services in order to keep the pricing competitive for these services.

8.6 Most operators appear to agree with the MCMC's proposed position that a single functional market applies for domestic managed data services as there is generally little difference between the retail and wholesale supply of these services.

MCMC findings on market definition

8.7 In the Market Definition Analysis, the MCMC sought feedback on whether licensees thought that the markets for tail transmission and domestic managed data services could be merged.

8.8 The MCMC received a mixed response on this issue from licensees. Those in favour of combining the two markets noted that tail transmission or LLCs are often provided as an essential input to the provision of local managed data services. Operators submitted that these services should be included in the market for tail transmission services.

8.9 On the other hand, other licensees raised differences in pricing and functionality (i.e. management of data services to allow for greater control over service quality) as key reasons why a separate market for domestic managed data services exists.

8.10 The MCMC recognises that LLCs are a key input for the provision of managed data services, but ultimately the MCMC considers that the differences in pricing and functionality between the two services are substantial enough to justify defining separate markets for tail transmission and domestic managed data services. Furthermore, LLCs are typically an input to local managed data services and are distinct in that respect.

8.11 For these reasons, the MCMC considers there to be a national market for the provision of local managed data services in Malaysia. The MCMC does not believe that tail transmission is a substitute for these services in Malaysia.

Assessment of dominance

Network distribution and market share

8.12 The MCMC does not have enough information at this time to be able to calculate accurate market share for the domestic managed data services market.

8.13 However, the MCMC notes that this market is closely related to the tail transmission market that was discussed above, where the distribution of leased circuit services in operation in Malaysia are set out in Figures 5 and 6. This data clearly illustrates Telekom Malaysia's continuing control of the majority of tail transmission lines across Malaysia, particularly in less populated areas (e.g. Sabah).

8.14 Further, the MCMC notes that Telekom Malaysia estimated a collective market share of 53% in the Metro-Ethernet market for Fibrerail,

Fibrecomm, Maxis, Celcom, DiGi, TT dotCom, Symphonet, V-Tel, Penangfon, Metrofon, Sacofa, Celcom Timur and NTT MSC.[135]

Market structure and the nature of competition

8.15 Domestic managed data services are closely connected with tail transmission services, in that tail transmission or LLCs are typically provided as inputs to the provision of local managed data services (whether by way of internal supply or acquired at wholesale by an access seeker). Domestic managed data services are then supplied to an end user at the retail level.

8.16 Therefore, much of the earlier discussion in section 7 of Part B in respect of the tail transmission market also applies to the market for domestic managed data services. In particular, the MCMC considers Telekom Malaysia's ability to offer the most comprehensive point-to-point transmission services as a significant barrier to effective competition in the local managed data services market.

8.17 Customers typically want connectivity to a particular location. However, it is also common for larger commercial or government customers to require the ability to offer transmission services into several different locations and to expect the same levels of service into those multiple locations. This can put operators with less extensive network coverage at a competitive disadvantage for two reasons:

(a) they may be unable to offer the same level of point-to-point transmission capability to as many locations across Malaysia; and

(b) they may be required to acquire wholesale LLC access, which limits their control over the managed data services and cuts into retail margins.

8.18 Further, the MCMC notes that the price differential between wholesale and retail supply of domestic managed data services is typically small.[136] This may make it unprofitable for smaller providers to provide managed data services in areas outside of their network footprint.

Barriers to entry or expansion

8.19 For the reasons given above in relation to the tail transmission market, the MCMC considers the market for domestic managed data services to have relatively high barriers to entry or expansion for the following reasons:

(a) high sunk costs to build new or additional tail transmission capabilities (and, in many cases, it may not make sense to duplicate the existing infrastructure);

[135] Telekom Malaysia Questionnaire Response at 2.12.
[136] See discussion on 'Functional dimension' in section 7 of Part B of Market Definition Analysis.

(b) an inability to access facilities and key inputs (e.g. due to preferential relationships or exclusivity agreements that are already in place with other operators); and

(c) the ability of larger operators (e.g. Telekom Malaysia) to achieve significant economies of scale and scope.

8.20 The MCMC also notes that there have been new entrants into the managed data services market in recent years (e.g. NTT-MSC, V-Telecom and Symphonet now offer wholesale Metro-Ethernet services)[137] which suggests that barriers to entry may not be completely prohibitive.

8.21 However, due to the reasons stated above in conjunction with Telekom Malaysia's continuing influence in the market, the MCMC considers that barriers remain high enough to prevent any real competitive constraints from entering the market.

Preliminary finding on dominance

8.22 The MCMC's preliminary view is that Telekom Malaysia should be considered as dominant in the market for domestic managed data services. However, the MCMC invites further comments on this issue.

Question 8

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you have any data to support a calculation of market share?
(c) Do you have any examples of a provider leveraging its position in the tail transmission market to negatively affect competition in the domestic managed data services market?
(d) Based on the number of new entrants in the domestic managed data services market, do you believe this has had a significant impact on competition in the market?
(e) Do you agree or disagree with the MCMC's preliminary finding on dominance?

9 Transmission (international) and international managed data services

Market overview

9.1 International data services are currently offered by several providers in Malaysia.

9.2 For example, Telekom Malaysia offers:

[137] Telekom Malaysia Questionnaire Response at 2.13.

(a) International Private Leased Circuits (**IPLC**), which it describes as "internationally dedicated point-to-point leased line services between customers' premises around the world." The IPLC service supports communications services such as data transmission, fax and video conferencing with digital circuits at different speeds ranging from 64 kbps up to 2 Gbps;[138] and

(b) Global Ethernet Virtual Private Line and International Ethernet Private Line services, which are managed data services that are largely targeted at large international companies that require cross-border connectivity solutions for high volumes of traffic over a secure network.

9.3 Similarly, FibreComm offers an International Private Leased Circuit service by means of FibreComm's terrestrial cross-border connections via Thailand and Singapore.

9.4 Separately, there are providers of international managed data services, namely frame relay, IP-VPN, Ethernet-based and ATM services using the same technology described above in relation to domestic managed data services.

9.5 The MCMC notes that Domestic Connectivity to International Services are currently included on the Access List.

Summary of submissions on market definition

International managed data services

9.6 Several licensees note that it is possible for Malaysian customers to order IPLC services from a foreign operator so this should be considered as a possible substitute.

9.7 However, one operator submits that in most cases these methods of transmission will not be economically substitutable. Further, another operator notes that hubbing for international transmission and international managed data services is typically not used by corporate customers as the preference is for direct point to point connectivity.

9.8 One licensee cautions that, if there is insufficient data available to the MCMC, it may be simpler to define a singular managed data services market for both domestic and international managed data services.

International transmission

9.9 A licensee claims that the retail market for international transmission is typically national with a single price nationwide for the end user contract. This supports the position of a national market for international transmission.

[138] Telekom Malaysia, *Digital Leased Line: IPLC* (accessed on 28 February 2014) available online at: < https://www.tm.com.my/Office/Business/Enterprise/DataServices/DigitalLeasedLine/Pages/IPLC.aspx>

MCMC findings on market definition

9.10 While it is technically possible for Malaysian customers to order IPLC services from a foreign operator, the MCMC notes that most licensees did not appear to consider this a practical option for international transmission. For example, licensees pointed to differences in costs and noted that corporate customers typically preferred point-to-point connectivity (i.e. rather than "hubbing" in a foreign market).

9.11 In response to its request in the Market Definition Analysis, the MCMC notes that it was not provided with any further information (e.g. pricing data) on international transmission. However, one licensee claims that its international transmission pricing is set uniformly across Malaysia, which would support the MCMC's proposal of a national market for international transmission.

9.12 The MCMC notes that one licensee raised the option of defining a single market for both domestic and international managed data services. The MCMC has considered this point, but believes that there are fundamental differences between the two managed data services which justify their inclusion in separate markets. For example, international transmission is acquired via a half circuit provided by a foreign operator, which can impact prices and service quality when compared against local managed data services which are acquired on an end-to-end basis. Therefore, the MCMC proposes to define separate markets.

9.13 The MCMC considers that:

(a) there are national retail and wholesale markets for IPLC transmission in Malaysia; and

(b) there is a separate, single national market for international managed data services in Malaysia.

Assessment of dominance

Market structure and the nature of competition

9.14 When a wholesale customer purchases an IPLC, it typically buys connectivity between its point of presence in Malaysia and its point of presence in another country. The MCMC notes that in almost all cases, the wholesale customer must also combine an IPLC service with LLC services in order to provide an end-to-end service to end users.

9.15 As discussed in section 7 of Part B above, the MCMC considers Telekom Malaysia to be dominant in the market for tail transmission or LLCs. Therefore, the MCMC is of the preliminary view that Telekom Malaysia should also be considered dominant in the IPLC market due to its high level of vertical integration and its continuing ability to leverage its dominance in the tail transmission market.

9.16 A similar position was recently taken in Singapore where the IDA found that, although the Terrestrial IPLC market was subject to increasing competition, Singtel continued to have a dominant position in the market. The reason given for this decision was that the incumbent ultimately retained the ability to leverage its dominance in the LLC market to adversely affect competition in the market for Terrestrial IPLCs.[139]

9.17 The MCMC notes that it may be possible for a competitor to avoid Telekom Malaysia's international transmission lines and domestic LLC network by providing a rival IPLC service by other means (e.g. a satellite-based service). However, customers would be unlikely to switch to a satellite-based service because there are generally significant price and performance differences between satellite-based and cable-based IPLC services. This is particularly true for international managed services which require a higher quality of service.

9.18 However, the MCMC may re-consider this position if further evidence is available to support or contradict the above dominance assessment.

International managed data services

9.19 International managed data services are closely related to IPLC services, in that IPLCs are typically provided as inputs to the provision of international managed data services. Therefore, much of the above analysis on IPLCs will also apply to the market for international managed data services.

9.20 In particular, the MCMC considers Telekom Malaysia's ability to offer the most comprehensive end-to-end transmission services due to its extensive backhaul network as a significant barrier to effective competition in the international managed data services market. Large business or government customers that acquire international managed data services will typically require the ability to offer transmission services into several different locations with a high quality of service. As discussed above in relation to domestic managed data services, this can put operators with less extensive network coverage at a competitive disadvantage.

9.21 For these reasons, the MCMC also proposes to find Telekom Malaysia dominant in the market for international managed data services.

9.22 Finally, the MCMC notes that Domestic Connectivity to International Services are currently included on the Access List. The MCMC welcomes any further comments from access seekers on the effectiveness of the current Access List in preventing anti-competitive outcomes in relation to Domestic Connectivity to International Services.

Barriers to entry

9.23 The MCMC considers the markets for IPLCs and international managed data services to have relatively high barriers to entry for the following reasons:

[139] IDA, *Final decision on the request by SingTel for exemption from dominant licensee obligations with respect to the business and government customer segment and individual markets* (2 June 2009) at 114.

(a) Infrastructure costs. It would likely be too costly to invest in a rival international transmission line and would not make sense to duplicate infrastructure on such a large scale (i.e. due to complex permitting requirements, costs versus potential revenues, etc.).

(b) Regulatory and legal requirements. To build and operate a transmission line typically requires compliance with onerous and costly regulatory and legal requirements. These requirements are likely to be particularly burdensome given the international nature of IPLCs and international managed data services.

(c) Contractual restrictions. Current contractual arrangements and commercial relationships between existing Malaysian providers and foreign network operators may make entry into the market for IPLCs and international managed data services difficult. For example, preferential terms of supply may dissuade a potential competitor from entering the market if those terms are not also offered to the new entrant.

Countervailing buyer power

9.24 The MCMC notes that it may also be possible for some large wholesale customers in Malaysia to seek international connectivity by hubbing through another location and then seeking connectivity to all other countries through that hub. Were this to occur on a large enough scale, it is conceivable that the threat of by-pass of a dominant operator's international transmission line could force the dominant operator to improve its pricing and terms of service.

9.25 In Singapore, the IDA looked at the same issue of whether a customer in Singapore could access any destination by hubbing through Hong Kong or Tokyo, but concluded that while hubbing may be technically possible it was not an economically or technically acceptable substitute for terrestrial IPLCs. Routing traffic through a third country would only be acceptable where direct connection was available, such as on the route from Singapore to Vietnam.[140]

9.26 The MCMC agrees with this assessment and, therefore, does not consider countervailing buyer power as a legitimate competitive constraint on a dominant provider at this time.

Preliminary finding on dominance

9.27 The MCMC's preliminary view is that Telekom Malaysia is dominant in the markets for:

(a) IPLC transmission; and

(b) international managed data services.

[140] IDA, *Explanatory Memorandum to the Decision of the IDA on request by SingTel for exemption from dominant licensee obligations with respect to the "International Capacity Services" market* (12 April 2005) at 55-58.

9.28 The MCMC welcomes views on its preliminary findings, together with further supporting data.

9.29 The MCMC welcomes comments on the effectiveness of the current Access List to constrain dominance in relation to Domestic Connectivity to International Services.

Question 9

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you have any data to support a calculation of market share?
(c) Should the MCMC consider countervailing buyer power as a possible competitive constraint on a dominant provider of international connectivity services?
(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

10 Transmission to submarine cable landing stations and earth stations

Market overview

10.1 The MCMC notes that there are limited statistics available for earth stations and cable landing stations. The MCMC is referring here to major points of origination or termination connected to satellite systems or cable systems, generally for international but also for domestic transmission purposes. Access to cable landing stations and earth stations is essential for any operator with capacity on systems terminating at those locations.

Summary of submissions on market definition

10.2 Several operators support the inclusion of other transmission options in the market for transmission to submarine cable landing stations and earth stations. For example, one prominent fixed network operator notes that there are other co-location facilities that can serve as a meeting point for connectivity to submarine cable landing stations and earth stations.

10.3 However, other operators do not view there to be any viable transmission options for the MCMC to consider in the Market Definition Analysis. One reason given to support this view is that pricing for transmission access to submarine cable landing stations and earth stations tends to be much higher in comparison to other forms of transmission over similar distances, which indicates that this form of transmission exhibits different competitive characteristics.

10.4 The operator also notes that urban exchange access is not likely to be a viable substitute as the access seeker usually has a point of presence near

the submarine cable landing station and does not need the traffic to be carried back to an urban centre.

MCMC findings on market definition

10.5 The MCMC notes it may be possible for an access seeker to use other transmission options to access a submarine cable landing station or earth station. For example, one operator notes that co-location facilities may serve as a meeting point for connectivity to remote stations.

10.6 However, the MCMC does not consider these transmission alternatives to be viable substitutes for direct transmission to a submarine cable landing stations and earth stations in most cases. As noted by other licensees, there are considerable pricing differences for direct transmission to remote stations and in many cases it may not make sense to acquire transmission from an urban exchange or co-location facility where the access seeker already has a point of presence closer to the submarine cable landing station and earth station.

10.7 Therefore, the MCMC considers each transmission service to a particular point of presence where a submarine cable landing station or earth station is located as an individual wholesale market.

Assessment of dominance

10.8 Submarine cable landing stations and earth stations are generally viewed as bottlenecks in the network supply chain. As such, access regulation is typically required to ensure access seekers are given access to those facilities so that they can get access to capacity on those systems.

10.9 Further, submarine cable landing stations and earth stations are often located in remote or inaccessible areas, which can make accessing these facilities particularly difficult. In most cases, alternative forms of transmission to these sites tends to be limited or non-existent.

10.10 For these reasons, the MCMC proposes to view transmission to each point of presence associated with a submarine cable landing station and earth station as without true substitutes and as a natural monopoly.[141] In effect, this would mean that each operator of a transmission facility to a submarine cable landing station or earth station is dominant.

10.11 The MCMC's proposed position is supported by a prominent Malaysian mobile provider, which claimed that inter East-West Malaysia traffic costs were high due to the high submarine costs being imposed by Telekom Malaysia. The same provider also attributed the lack of new entrants in the market and poor expansion into East Malaysia to the high cost of transmission by way of submarine cables.[142]

[141] See discussion on 'Product dimension' under section 6 of Part E of Market Definition Analysis.
[142] Response by a mobile operator to MCMC Questionnaire at 2.2(e).

Barriers to entry

10.12 The MCMC considers that many of the barriers to entry that are discussed above in relation to the other transmission markets (e.g. inter-exchange, tail, IPLCs, etc.) would also broadly apply for transmission to submarine cable landing stations and earth stations.

10.13 In particular, the MCMC notes the high sunk costs needed to build new or additional transmission capabilities which are likely to deter entry into the market to a particular cable landing station or satellite earth station. This is especially true where a site is remote and it would not make sense to duplicate existing infrastructure.

Preliminary finding on dominance

10.14 The MCMC proposes to consider each operator of a transmission facility to a submarine cable landing station or earth station as dominant.

Question 10

The MCMC is seeking views on the following:
(a) Do you have any further comments on market definition?
(b) Do you have any data to support a calculation of market share?
(c) Do you agree or disagree with the MCMC's preliminary finding on dominance?

11 Broadcasting transmission

Market overview

11.1 In Malaysia, terrestrial broadcasting is undertaken by the free to air (**FTA**) networks. The main FTA providers in Malaysia are:

(a) RTM 1;

(b) RTM 2;

(c) TV 3;

(d) ntv7;

(e) 8TV;

(f) Channel 9; and

(g) TV AlHijrah.[143]

[143] MCMC, *Communications & multimedia pocketbook of statistics (Q4, 2013)* at page 35.

11.2 While these FTA networks are responsible for broadcast transmission, they are dependent on third party transmission between their play-out facilities and the transmission tower.

11.3 This transmission to the broadcasting tower is generally provided by Telekom Malaysia by means of its Broadcast Transmitter Service.[144]

Digital television

11.4 The broadcasting sector in Malaysia is currently in a state of transition from analogue to digital broadcasting.

11.5 The MCMC has decided that there will be a single Common Integrated Infrastructure Provider (**CIIP**) for all of the FTA broadcasters in Malaysia. After a lengthy tender process, on 8 January 2014 the MCMC announced that Puncak Semangat Sdn Bhd (**PSSB**) was the successful bidder to build, operate and manage the infrastructure for Digital Terrestrial Television Broadcast (**DTTB**) service in Malaysia.

11.6 PSSB is required to develop the DTTB infrastructure which includes a digital multimedia hub and a network of high, medium and low powered digital TV transmitters nationwide that will have the technical capability, of carrying up to 45 standard definition or 15 high definition digital television channels.

11.7 Initially, the migration to digital will be for the current government-owned and private stations, namely TV 1, TV 2, TV 3, ntv7, 8TV, TV 9, TV AlHijrah and Bernama TV. The final mix of channels shall be determined commercially between the CIIP and the broadcasters. The current radio channels can also be carried on the DTTB platform.

Summary of submissions on market definition

Market for broadcasting transmission

11.8 As a monopoly service, several operators submit that the DTTB should be subjected to access regulation via inclusion on the Access List and a finding of dominance in the relevant market. One operator also submits that with the exclusive appointment/concession, CIIP must not be allowed to be a broadcaster as this will result in a 'conflict of interest' position.

11.9 Further, another operator notes that the single CIIP should encourage common sharing of existing infrastructure wherever available to avoid duplication, which will result in lower capital expenditure and more competitive pricing.

11.10 A prominent FTA provider submits that two portions of broadcasting transmission should remain separate: from the broadcaster to the CIIP and from the CIIP to customers. The FTA provider also submits that the CIIP must not impose, or control access to related matters such as Digital Rights Management (**DRM**), conditional access, set top box configuration and

[144] See: https://www.tm.com.my/Office/Business/Enterprise/Broadcast/Pages/Transmitter.aspx

requirements or any form of control which will affect the cost of acquisition of materials and content by the broadcasters.

11.11 Various licensees have expressed support for the finding of separate FTA and subscription television broadcasting markets (this issue is discussed in section 13 below).

Other satellite services

11.12 In response to the MCMC's question on whether there should be additional markets for any 'other satellite services', submissions that were received included:

(a) one operator submits that there should be a separate market for Very Small Aperture Terminal (**VSAT**) which is currently not captured by the proposed market definitions for the various forms of transmission services; and

(b) another operator requests that Freesat (NJOI) be captured as part of the broadcast/FTA broadcast market as it is a free TV service delivered via satellite as opposed to terrestrial.

MCMC findings on market definition

11.13 The MCMC notes that it did not receive any submissions in relation to its proposed market for broadcasting transmission to towers for the purposes of transmission by FTA licensees.

11.14 In relation to the MCMC's proposed national market for digital transmission, the MCMC notes that all submissions that were received support finding a separate market that centres on FTA digital broadcasts from the DTTB infrastructure.

11.15 Therefore, for the reasons set out in the Market Definition Analysis,[145] the MCMC proposes to maintain its preliminary view that there are separate national markets for:

(a) broadcasting transmission to towers for the purposes of transmission by FTA providers; and

(b) digital transmission that includes all FTA digital broadcasters that use the DTTB infrastructure to broadcast their content.

11.16 The issues of whether to include the DTTB on the Access List and the possible regulation of the CIIP are separate discussions that fall outside the scope of this Public Inquiry Paper.

[145] See: discussion on 'Transmission to the tower' under section 8 of Part B of Market Definition Analysis.

Other satellite services

11.17 The MCMC notes that two types of satellite services were identified by licensees as possible candidates for inclusion the Market Definition Analysis. These are:

(a) the Very Small Aperture Terminal or VSAT; and

(b) the Freesat NJOI.

11.18 The MCMC requests further submissions from licensees on whether either of these 'other' satellite services should be defined as a separate satellite services market. The MCMC will make a determination on this issue based on any further submissions.

Assessment of dominance

Transmission to the tower

11.19 Broadcasters require access to transmission capacity to reach the relevant towers for broadcast. At the moment, the only provider of transmission to the broadcasting tower in Malaysia is Telekom Malaysia by means of its Broadcast Transmitter Service.

11.20 Several operators have claimed that Telekom Malaysia is in a position of dominance as the sole broadcasting transmission provider. For example, one FTA provider requested permission from Telekom Malaysia to upgrade the transposer at Bukit Bakar Kelantan to install its own full transmitter system using TVRO, which would allow for improved reception and picture quality. Instead, the FTA provider claims that Telekom Malaysia refused the provider's request and offered its own TVRO to the provider at as much as 7 times the cost.[146] The MCMC notes that evidence has not been provided by the FTA provider to substantiate these claims.

11.21 The MCMC notes that there do not appear to be any viable alternatives to terrestrial transmission, unless broadcasting services were supplied over other mediums, such as online, cable or satellite. However, given the importance of FTA broadcasting to the Malaysian public and the cost of building rival broadcasting infrastructure, these are not considered viable alternatives. Therefore, the MCMC is of the opinion that there are no effective substitutes to Telekom Malaysia's Broadcast Transmitter Service at this time.

11.22 For these reasons, the MCMC proposes to view Telekom Malaysia as dominant in the market for transmission to the broadcasting tower.

Digital transmission

11.23 The introduction of a single DTTB network means that all digital broadcasters of FTA channels, whether they are government-owned or

[146] FTA provider Questionnaire Response at 6.

privately-owned, are now required to share access to the same broadcasting transmission infrastructure.

11.24 Therefore, once it is fully operational, the MCMC considers that DTTB will effectively form a natural monopoly as broadcasters will have no other option for broadcasting their digital content, unless they transition to offering their content by other means (e.g. online).

11.25 As the body in charge of operating and managing the DTTB, the MCMC proposes to consider PSSB dominant in the market for digital broadcasting.

11.26 The PSSB will not be subject to typical competitive constraints given that there is only one DTTB. Therefore, the MCMC has also developed an access regime that governs how the DTTB multiplexer is shared among the access seekers.

Preliminary finding on dominance

11.27 The MCMC proposes to consider Telekom Malaysia as dominant in the national market for broadcasting transmission to towers.

11.28 The MCMC proposes to consider PSSB dominant in the national market for digital transmission.

Question 11

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you have any data to support a calculation of market share?
(c) Are there further examples of Telekom Malaysia attempting to use its position as the sole provider of broadcasting transmission services to improve its own position?
(d) Should the MCMC define separate markets for VSAT and/or Freesat NJOI satellite services?
(e) Do you agree or disagree with the MCMC's preliminary finding on dominance?

12 Directory services

Market overview

12.1 Directory services are offered by several operators in Malaysia. For example, Telekom Malaysia offers a Directory Enquiries service, which may be accessed by dialling '103' and providing the specific name and location of the enquiry to help the Customer Service Assistant to locate the enquired number. Charges for this directory service include a flat rate fee (RM0.30), as well as any additional fees that apply depending on the duration of the call and the network from which the call is made (e.g. Maxis, Celcom, etc.).

12.2 In March 2014, Maxis launched a new online directory service, FINDIT, in partnership with FINDIT Malaysia (the largest digital directory service in Malaysia). FINDIT may be used by subscribers on any mobile network. However, Maxis customers can use the directory service for free without data charges applying. FINDIT claims to offer consumers access to over 175,000 business listings in over 2,500 categories and it includes a number of additional services, such as a built-in location-based feature that helps customers find the nearest products and services to their location.

12.3 TM Info-Media Sdn Bhd (a subsidiary of Telekom Malaysia) also publishes Yellow Pages and E-Yellow Pages directory services.

Summary of submissions on market definition

12.4 A directory service provider views directory services as being out of scope of the Market Definition Analysis. These services are Required Application Services (**RAS**) that certain licensees must provide and they are often charged at below cost. For these reasons, competition issues are unlikely to arise so directory services should be excluded from the Dominance Study.

12.5 However, the provider also notes that it may be necessary to include "premium" directory services where it is possible to charge and profit from these services. For a comprehensive analysis and informed decision, the role of advertising should be broadly considered when defining the market for directory services ("premium").

12.6 A second mobile provider also supports the definition of a separate "premium" directory services market. Moreover, the provider claims that prices in such a market should be regulated for the benefit of the public.

12.7 The market for directory services is shifting away from operator-provided directories (e.g. as a universal service) to commercial directory services. For example, the IDA in Singapore recently removed regulatory requirements for fixed operators to publish directories.

12.8 A prominent mobile operator notes that, while the traditional markets of voice and paper directories have been around for some time and are well understood and used by telephony users, the possible markets for online directories or premium services are less clear. For example, the operator notes that some services focus on selected categories (e.g. restaurants) and some further provide additional enhanced features such as directions and/or maps.

MCMC findings on market definition

12.9 The MCMC notes that most respondents do not appear to have any issues with the proposed markets for voice and paper directories. These two forms of directory services have been in operation for a long time and, as such, are generally well understood markets.

12.10 Further, as noted by one licensee, certain directory services are provided as Required Application Services and are typically offered at below cost. This issue was taken into consideration by the MCMC during the dominance assessment below.

12.11 The MCMC notes that a mobile operator has questioned the definition of a separate market for online directory services. The operator notes that online directories can vary in form and depth of service and, as such, they may be difficult to define into a single product market.

12.12 As discussed in the Market Definition Analysis,[147] the MCMC notes that there is a wide range of possible online directory options to choose from with a higher degree of substitution between competing online directory services (e.g. Google, Yahoo, FINDIT, etc.). However, this does not mean that a market for online directory services should be excluded. Instead, it is likely to have impacts on the level of market power that any one operator is able to exert over the online directory services market with so many competitive options available to Malaysian consumers. This issue is discussed further below in the assessment of dominance.

12.13 Therefore, for the above reasons, the MCMC considers that there are national markets for the provision of directory services that apply across the three main product segments (i.e. voice, online and paper directories).

"Premium" directory services

12.14 In the Market Definition Analysis, the MCMC sought feedback on whether licensees thought that a separate "premium" directory services market should also be defined.

12.15 The MCMC received a mixed response on this issue from licensees. Those in favour of defining a separate market for "premium" directory services also requested that the MCMC consider regulating the prices that may be charged for such services. On the other hand, another licensee claimed that it may be difficult to define a separate market for "premium" directory services as the nature and scope of these services remains unclear.

12.16 The MCMC is inclined to agree with the latter licensee to find that a separate market for "premium" directory services is not necessary at this time. Without further evidence to support defining such a market, it is unclear what directory services would be viewed as "premium". However, the MCMC notes the services that may form part of this market and will keep it under consideration.

Assessment of dominance

Pricing of directory services (generally)

12.17 At a general level, other than the ability to pay an additional fee for a premium directory service, each of the three product segments tends to be

[147] See: discussion on 'Directory Services' under section 3 of Part D of Market Definition Analysis.

roughly the same price (i.e. free or for a minor fee). This seems to indicate that no single provider has been able to exercise market power in any of the three markets, otherwise it is likely that such a provider would have been able to inflate directory service prices in one or more of the product segments or obtain some other competitive advantage.

12.18 For example, the MCMC considers it likely that an increase in price of one directory service would lead customers to switch to another directory service within the same product segment (e.g. from FINDIT Malaysia to E-Yellow pages), where available.

12.19 However, the MCMC notes that in some markets the number of alternative options may be limited (e.g. paper directories). In any case, to date this does not appear to have caused increases in prices for these services, despite a lack of competitive options.

Online directories

12.20 The MCMC considers the online directory market to be competitive for two main reasons:

(a) Availability of competitive options. A number of directory services are now available online (e.g. E-Yellow Pages, FINDIT Malaysia, Google, Yahoo, etc.) for free or for only a minor fee. The large number of competitive options should continue to prevent any single operator from gaining a position of dominance in the market for the foreseeable future.

(b) Entry into the market. The MCMC notes that the continued entry of new participants into the online directory services market. For example, FINDIT Malaysia recently entered the market in March 2014.[148]

12.21 The MCMC notes that there have been attempts by some providers to leverage their position in other markets (e.g. mobile markets) to draw customers to their associated online directory services. For example, Maxis offers FINDIT Malaysia as a free service for its mobile subscribers. However, these offers appear to promote the online directory service as an add-on for the mobile service rather than as a standalone service. Thus, the MCMC does not consider these forms of bundling to pose a threat to competition in the mobile or online directory services markets at this time.

Voice directories

12.22 The MCMC notes that voice directory services tend to be directed at subscribers of a particular mobile operator. For example, users of Telekom Malaysia's Directory Enquiries service are charged a flat rate fee (RM0.30), as well as any additional fees that may apply, including added charges for those that call from a different network (e.g. Maxis, Celcom, etc.).

[148] See: http://www.rediff.com/business/report/findit-launched-to-enhance-e-commerce-experience-in-malaysia/20140325.htm.

12.23 However, as discussed above in relation to online directory services, voice directory services appear to be an add-on service for the primary voice telephony plan. It is unlikely that a potential subscriber would select a particular provider simply because it wanted cheaper rates when using that provider's voice directory service. Therefore, the MCMC considers the market for voice directory services to be reasonably competitive at present.

Paper directories

12.24 The MCMC notes that paper directories services appear to have the least number of competitive options. For example, it would be difficult for a competitor to offer a paper directory that is as comprehensive and has the same widespread distribution as TM Info-Media's Yellow Pages.

12.25 However, as discussed above, these paper directories tend to be free or offered for only a minimal fee which would seem to suggest that alternative competitive constraints may exist in the market to prevent a single provider from artificially raising the price of its services (e.g. local or regional directory publications). Therefore, the MCMC considers the paper directory services market to be subject to effective competition at this time.

Preliminary finding on dominance

12.26 The MCMC is of the preliminary view that the national markets for the provision of directory services across the three main product segments (i.e. voice, online and paper directories) are reasonably competitive at this time. Therefore, the MCMC considers there to be no licensee in a position of dominance in any of the three directory services market.

Question 12

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you have any data to support a calculation of market share?
(c) Do you believe that bundling (e.g. with mobile and fixed telephony services) is likely to have an impact on competition in the online and/or voice directory services markets moving forward?
(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

13 Broadcasting services

Market overview

13.1 In this section the MCMC will consider the markets for platforms over which content services are broadcast. The MCMC has separately considered the relevant markets associated with transmission to towers and, in the case of

digital television, transmission from towers. Content acquisition markets are also separately considered elsewhere in the Public Inquiry.

13.2 In Malaysia, the three main broadcasters are:

(a) the commercial FTA television service providers, namely Media Prima Group;

(b) the Government-owned Radio Televisyen Malaysia (**RTM**); and

(c) the satellite pay TV provider, Astro Malaysia Holdings.

13.3 With the advent of the new digital broadcasting platform, the MCMC notes that FTA broadcasters plan to launch more local TV channels that come with high definition services, interactivity and lite pay services such as VOD, pay per time, pay per view, personal recording as well as the ability to switch to broadband services on demand.[149]

13.4 The main FTA channels in Malaysia are:

(a) RTM 1;

(b) RTM 2;

(c) TV 3;

(d) ntv7;

(e) 8TV;

(f) Channel 9; and

(g) TV AlHijrah.[150]

13.5 Astro is currently the only direct-to-home satellite TV provider that transmits digital satellite television and radio in Malaysia. In addition, Astro offers IPTV services in partnership with TT dotcom and Maxis and also the Astro On-the-Go service (in partnership with Maxis) via devices such as PCs, laptops, tablets and smartphones.[151]

13.6 Telekom Malaysia also offers its own IPTV service, Hypp TV, which it bundles as part of its UniFi triple play service offering. The Hypp TV service comprises VOD services, pay per view options and free live TV channels.

13.7 As of 2013, the total number of pay TV subscriptions in Malaysia was estimated at approximately 3,865,000, which equates to a penetration rate of 55.7%.[152] There were also approximately 658,000 IPTV subscriptions across Malaysia over the same period.[153]

[149] MCMC, *IPR 2012 Shaping a Connected Future* (2012) at page 114.
[150] MCMC, *Communications and Media Pocket Book of Statistics (Q4 2013)* at page 35.
[151] MCMC, *IPR 2012 Shaping a Connected Future (2012)* at page 117.
[152] MCMC, *Communications and Media Pocket Book of Statistics (Q4 2013)* at page 35.
[153] MCMC, *Communications and Media Pocket Book of Statistics (Q4 2013)* at page 36.

13.8 Since the 2004 Dominance Study, the communications sector in Malaysia has experienced (and continues to experience) significant technological and product innovation. In the broadcasting sector, this has included the movement from linear to on-demand supply, the emergence of new cable operators, the increase in intermodal competition (e.g. IPTV versus traditional media platforms), and a planned migration from analogue to digital broadcasting that is scheduled to begin in 2015.

13.9 The extent to which these changes may affect competition in the broadcasting services markets will be an important consideration when assessing dominance below.

Summary of submissions on market definition

FTA and subscription broadcasting markets

13.10 Most licensees agree that the markets for FTA and subscription broadcasting should be separate.

13.11 However, other operators disagree with the MCMC's proposed identification of separate markets for FTA and subscription broadcasting services for the following reasons:

(a) FTA and subscription television broadcasters effectively compete for viewers' attention based on the same basic factors such as quality and attractiveness of programming;

(b) FTA and subscription television services exert competitive constraints on one another based on the overlap and desirability of their respective content; and

(c) there is evidence of customer switching from subscription to FTA television, which may be seen in changing customer viewing patterns (and not necessarily in the termination of a subscription). For example, the MCMC was provided with survey data to show that [c-i-c] of pay TV subscribers who terminated their subscription claimed to watch FTA channels as a preferred medium for accessing content.[154]

13.12 A licensee also disputed the MCMC's claim that an actual SSNIP occurred in the subscription television market between 2012 and 2014. The licensee submits that demand substitutability should not be conducted solely in relation to price and subscription numbers, but also in relation to any changes in content quality. For example, over the same period of 2012 to 2014, the licensee also improved its content offering (e.g. greater number of channels, free access to World Cup games, etc.) which helps explain customer retention despite increases in price.

[154] Feedback from a broadcaster, Informal Consultation 2.3.3.5

13.13 One operator notes that Astro is a subscription television provider and it also has NJOI, which the operator claims "is basically FTA TV but via satellite."

OTT broadcasting services

13.14 A licensee submits that the MCMC should include OTT providers within the same market as FTA and subscription television broadcasters. The provider submits that the MCMC has not sufficiently taken into account the impact of OTT content delivery services and the constraint that such services exert on the traditional content distribution markets (i.e. FTA and subscription TV) in its analysis of the broadcasting services market.

13.15 The provider also notes that support for such an approach has already been demonstrated in the United Kingdom by the UK Competition Commission. In a 2012 report, the UK Competition Commission noted:

> *"We also acknowledged that, because the OTT services of LOVEFiLM and Netflix were new, there was limited evidence available regarding how far they constrained some or all of the elements of traditional pay-TV packages. However, although smaller suppliers typically exercise a limited constraint on larger suppliers, this does not mean that smaller suppliers should be excluded from the market where they are one among a number of relevant constraints, and a similar argument applies to new products with similar characteristics to existing products in a differentiated product market. At the time of launch, a new product is unlikely by itself to constrain the prices of existing products but this in itself does not mean that it should be excluded from the market."*[155]

13.16 The provider also notes that there are empirical examples of supply-side substitution between FTA, subscription and OTT broadcasters. For example, Media Prima, an FTA broadcaster, recently launched Tonton, an online product offering video-on-demand and catch up service to complement its existing FTA linear television services.

[155] UK Competition Commission, *Movies on pay TV market investigation: A report on the supply and acquisition of subscription pay-TV movie rights and services* (2 August 2012) at paragraph 4.112.

MCMC findings on market definition

FTA and subscription broadcasting markets

13.17 The MCMC notes that a licensee disagrees with the proposed separation of FTA and subscription broadcasting services markets. The licensee claims that both FTA and subscription broadcasters compete for the same viewers and place a competitive constraint on one another.

13.18 The MCMC accepts that there may be a certain degree of competition between FTA and subscription television broadcasters. However, as discussed in the Market Definition Analysis,[156] there tends to be little substitutability between the broadcasting markets as pay TV subscribers are willing to pay for certain content (e.g. live sport and Hollywood) that is often not available over FTA channels.

13.19 As discussed in the Market Definition Analysis,[157] the MCMC notes that Astro was able to raise the price of its basic package plus sport by 10% without experiencing any significant increases in churn. The MCMC accepts that stable churn rates can partially be explained by corresponding improvements in content offering. However, the MCMC considers that Astro's high degree of price independence with little substitution to FTA alternatives as an indicator that separate markets for FTA and subscription television broadcasting markets exist.

13.20 The MCMC also notes that other international regulators have come to a similar conclusion. For example, this issue was considered by the ACCC in Australia during its assessment of a proposed merger between Foxtel (a subscription cable provider) and Austar (a satellite television provider) when it stated:

> *"the ACCC considered that other sources of supply of audiovisual content to end consumers including FTA television, mobile TV and audiovisual content delivered on a transactional basis, including over the internet, were not sufficiently close substitutes to be considered in the same market as subscription television services…"*[158]

13.21 The ACCC ultimately identified the relevant market as being a "national market for the supply of subscription television services". The reasoning behind its decision was as follows:

> *"If there was a market with multiple subscription television service providers, the competition between those providers would be significantly closer and more vigorous than between the subscription*

[156] See: discussion on 'Broadcasting services' under section 5 of Part D of Market Definition Analysis.
[157] See: discussion on 'Broadcasting services' under section 5 of Part D of Market Definition Analysis.
[158] ACCC, *Public competition assessment of Foxtel and Austar merger* (14 June 2012) at 37.

television providers and FTA television broadcasters."[159]

13.22 Similarly, the EC in *BskyB/Kirch Pay TV* took the same approach when it stated:

> *"[t]he fact that subscribers are prepared to pay considerable sums for pay-TV indicates that the latter is a distinguishable product with specific extra utility."*[160]

13.23 The MCMC also notes that most licensees also support having separate FTA and subscription television broadcasting markets.

13.24 Therefore, the MCMC maintains its initial position that separate markets exist for FTA and pay TV broadcasting services.

OTT broadcasting services

13.25 The MCMC was provided with strong evidence to support the inclusion of OTT service providers in the broadcasting services market. In particular, the MCMC notes that other Malaysian broadcasters now view online content distribution services as viable competitors.

13.26 Most IPTV offerings in Malaysia are pay TV services. For example, Telekom Malaysia charges a subscription fee of between RM30 and RM50 per month for its online HyppTV service.[161] While this is less than Astro's rates which range from approximately RM52 to RM155 per month,[162] the MCMC considers the rates for both services to be relatively comparable. If a SSNIP were applied, the MCMC considers it likely that subscribers of either service may consider switching services, particularly if the content offerings were similar.

13.27 The MCMC also notes the supply-side substitution that has already occurred in the Malaysian broadcasting sector, such as:

(a) Tonton, which is an OTT service that is offered by Media Prima (a prominent Malaysian FTA provider); and

(b) Astro B.yond and Astro On-the-Go, which are IPTV services that are offered by Astro (in conjunction with other telecoms operators).

13.28 The MCMC also notes that the Competition Commission in the United Kingdom recently took a similar approach in 2012 (see quote above). The Competition Commission found that, although OTT broadcasting services tend to be relatively small in comparison to other traditional pay TV broadcasting services (e.g. satellite), OTT services are likely to continue

[159] ACCC, *Public competition assessment of Foxtel and Austar merger* (14 June 2012) at 34.
[160] European Commission, *Market Definition in the Media Sector – Economic Issues* (November 2002) at 3.5.10.
[161] See: https://www.tm.com.my/hypptv/Pages/about.aspx?id=56#personal (accessed on 21 May 2014).
[162] See: http://support.astro.com.my/shop.aspx (access on 21 May 2014).

gaining in popularity to effectively compete for viewers in the broader subscription broadcasting services market.

13.29 Therefore, in response to licensee submissions, the MCMC now considers that OTT broadcasting services should be recognised in the broadcasting services markets. The MCMC's preliminary view is that these services, which include all subscription IPTV services, should form part of the broader subscription television broadcasting market (as that market is described in the Market Definition Analysis).

MCMC findings on broadcasting services market

13.30 For the above reasons, the MCMC views the national markets for the supply of broadcasting services as being fundamentally separate for FTA and subscription television providers (including IPTV).

Assessment of dominance

Market share – FTA broadcasting services

13.31 The primary source of revenue for FTA broadcasters is advertising expenditure. Therefore, the MCMC proposes to use the percentage of advertising expenditure by FTA channel as one method of calculating market share in the Malaysian FTA broadcasting services market. The other relevant quantitative factor is audience share. This is discussed further below, together with other qualitative factors.

13.32 The following FTA television advertising expenditures figures were collected from a Nielson Report for financial year 2013:

Figure 8: FTA Television advertising expenditure (FY13)

No	Terrestrial TV	FTA television advertising expenditure (FY13)	Market share
1.	RTM 1	RM 91,062,003	2.9 %
2.	RTM 2	RM 249,999,127	7.9 %
3.	TV 3	RM 1,351,286,987	42.5 %
4.	ntv7	RM 445,794,870	14.0 %
5.	8TV	RM 524,970,585	16.5 %
6.	Channel 9	RM 489,441,596	15.4 %
7.	TV Alhijrah	RM 26,026,100	0.8 %
Total:		**RM 3,178,581,268**	**100 %**

13.33 The MCMC notes that Media Prima operates channels TV 3, ntv7, 8TV and Channel 9 from the above list of FTA terrestrial channels. The combined market share for these channels is 88.4% of the total FTA television advertising expenditure for financial year 2013 in Malaysia.

13.34 Based on this information, the MCMC considers that this combined high market share is likely to be a strong indicator that each of TV 3, ntv7, 8TV and Channel 9, as the relevant licensees, are dominant in the FTA

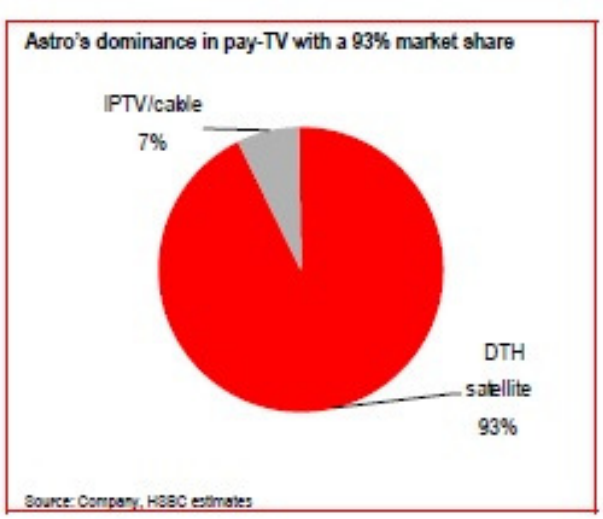
broadcasting services market on a collective basis as they are all ultimately owned by Media Prima.

Market share – subscription broadcasting services

13.35 Astro submits that its market share in 2013 for broadband and subscription television revenues was [c-i-c].[163] However, the MCMC notes that the market currently under consideration does not include broadband revenues. Therefore, this market share estimate appears to be low.

13.36 Instead, the MCMC is of the view that Astro's market share in the subscription television market (including IPTV services) is likely to be closer to 93%, based on the estimate published by HSBC which includes IPTV:

Figure 9: HSBC estimate of market share in pay TV market



13.37 As the principal satellite pay TV provider in Malaysia, Astro is likely to have the majority of market share in the subscription broadcasting services market. Therefore, despite the entrance of new IPTV subscription services (including Astro's own IPTV services), the MCMC considers Astro's substantial market share as a strong indicator that it is likely to be dominant in the subscription broadcasting services market.

[163] Astro Questionnaire Response at 1.10(b).

Competition in the subscription broadcasting market

13.38 A number of potential pay TV competitors have emerged in recent years with the growth of inter-modal broadcasting platforms. However, the MCMC does not consider the growing number of IPTV options as a viable threat to Astro (which has launched its own IPTV products) at the moment due to the latter's commanding market share in the pay TV market, as illustrated above.

13.39 In submissions to the MCMC, several of Astro's competitors have identified instances where the satellite provider was able to act anti-competitively without fear of repercussion from the market. For example, one provider noted that for carriage of its television and radio channels on satellite platform, it has no alternative but to deal with Astro as the exclusive DTH satellite provider in Malaysia. The provider claims that Astro often broadcasts the provider's channels at a lower quality, but the provider is unable to respond due to a lack of alternatives in the market.[164] The MCMC considers that, if evidence was provided by the provider to substantiate its allegations, this example of Astro unilaterally reducing the quality of output would be a possible indicator of dominance.

Pricing behaviour

13.40 The MCMC notes that Astro appears to have a significant degree of independence in price setting for its subscription broadcasting services. This position is supported by the churn and content pricing data that Astro supplied to the MCMC.

13.41 Between 2011 and 2013, Astro was able to maintain a relatively stable subscriber base with a reported difference in moving annual total churn from 10% to 8% over the two year period.[165] However, within this same period, the company also increased the price of its basic package plus sport by approximately 10%.[166] As discussed above, although an improved content offering over the same period may help explain Astro's relatively stable churn rates, the MCMC considers this example to be a strong indicator of Astro's price setting independence.

13.42 By way of comparison, the MCMC also notes that standard churn rates of subscription television providers in other markets tend to be higher. For example, in Australia Foxtel reported a churn of 13.4% in 2012[167] and in the UK BSkyB reported a churn of 10.8% in 2013.[168]

13.43 Further, the MCMC also notes that Astro's subscription fees are relatively high when compared with other IPTV services. For example, Telekom Malaysia charges a subscription fee of between RM30 and RM50 per month

[164] Content provider Questionnaire Response at 5(b).
[165] Astro Annual Report 2013 for Financial Year Ending 31 January 2014.
[166] Astro Questionnaire Response at 1.5(c).
[167] See: http://www.foxtel.com.au/about-foxtel/communications/foxtel-announces-solid-results-in-face-of-tough-consumer-env-160520.htm.
[168] BSkyB, *Annual Report 2013* at page 8.

for its online HyppTV service,[169] which is significantly less than Astro's rates which range from approximately RM52 to RM155 per month.[170]

13.44 The MCMC notes that this high degree of pricing independence on the part of Astro in relation to other participants in the subscription broadcasting market would strongly suggest that it is in a dominant position within the relevant market.

Activity in the FTA broadcasting services market

13.45 There are currently 7 main FTA broadcasters in Malaysia (listed above). Following the planned migration from analogue to digital broadcasting that is scheduled to begin in 2015, the number of broadcasters is expected to increase as new digital TV transmitters will now have the technical capability to carry up to 45 standard definition or 15 high definition digital television stations. However, while the transition to digital TV may have future implications on the ability of a FTA provider to dominate the market, the effect of digital and new digital channels on advertising revenue and audience share is difficult to predict. Accordingly, for present purposes the focus of this analysis is on the current state of competition in the FTA broadcasting services market.

13.46 As discussed above, in the previous financial year Media Prima received the majority of FTA advertising revenue between its four FTA channels (TV 3, ntv7, 8TV and Channel 9).

13.47 The MCMC also notes that Media Prima channels tend to have greater viewership numbers than the other three FTA channels (i.e. TV 1, TV 2 and TV AlHijrah). For example, a Nielsen Television Audience Measurement for selected dates in 2013 found that the share of viewers across the FTA channels was broken down in the following order:[171]

(a) TV 3 at 21.9% of viewers;

(b) Channel 9 at 7.2% of viewers;

(c) TV 2 at 5.7% of viewers;

(d) 8TV at 5.1% of viewers;

(e) ntv7 at 4.5% of viewers;

(f) TV 1 at 4.4% of viewers; and

(g) TV AlHijrah at 0.1% of viewers.

Note that the total percentage of viewers does not equal 100% as the original findings included both FTA and pay TV channels.

[169] See: https://www.tm.com.my/hypptv/Pages/about.aspx?id=56#personal (accessed on 21 May 2014).
[170] See: http://support.astro.com.my/shop.aspx (access on 21 May 2014).
[171] Nielsen Television Audience Measurement 2013.

13.48 Based on the Nielsen measurement, the total share of viewers of the four Media Prima channels at approximately 38.7% was nearly four-times the combined share of the remaining three FTA channels at approximately 10.2%.

13.49 Therefore, due to the leading position of Media Prima's four FTA channels in terms of both advertising revenues and viewership, the MCMC considers that each of Media Prima's licensed channels are likely to be collectively dominant in the FTA broadcasting services market.

Barriers to entry or expansion

13.50 The MCMC considers that the barriers to entry or expansion in the broadcasting services markets are likely to be high for the following reasons:

(a) Cost of entry or expansion. The capital costs of entering the broadcasting market may vary greatly depending on the nature of the broadcasting service that is to be provided. For example, Astro notes that costs will depend on the level of infrastructure investment and breadth and quality of products and channel offering.[172]

(b) Regulatory and legal requirements. The television broadcasting sector tends to be highly regulated, which can make compliance for a potential new entrant difficult. For example, Media Prima notes that regulation in the area covers a range of topics such as advertising restrictions, data protection, censorship, content restrictions, etc.[173]

(c) Contractual restrictions. The existence of long term supply contracts in a market can constitute a barrier to entry if it prevents or restricts potential entrants from accessing key inputs or customers. For example, several licensees have noted the effect of Astro's long term exclusivity agreements with content providers.[174] This issue is discussed further in section 14 below in relation to content acquisition markets.

Preliminary finding on dominance

13.51 The MCMC's preliminary view is that:

(a) Astro is currently dominant in the national market for the supply of subscription broadcasting services; and

(b) TV 3, ntv7, 8TV and Channel 9 are likely to be collectively dominant in the national market for the supply of FTA broadcasting services.

[172] Astro Questionnaire Response at 2.2(d).
[173] Media Prima Berhad Questionnaire Response at 5(b).
[174] For example, see: Media Prima Berhad Questionnaire Response at 5(b) and Telekom Malaysia Questionnaire Response at 3.14.

Question 13

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you agree with the preliminary findings on market share?
(c) Is there any evidence of a particular FTA provider acting independently of its competitors in the FTA broadcasting services market?
(d) Do you believe the growth of IPTV services is likely to have a substantive effect on the level of competition in the subscription broadcasting services market in the future?
(e) Are you able to provide further data (e.g. viewership numbers) to support the calculation of market share for the broadcasting services markets?
(f) Do you agree or disagree with the MCMC's preliminary findings on dominance?

14 Content acquisition

Market overview

14.1 An overview of the FTA broadcasters and subscription television broadcasters is set out in section 13 above.

14.2 In terms of content in Malaysia, the most popular content that attracts viewers has tended to be premium offerings such as live sporting events (e.g. English Premier League (**EPL**), Malaysia FA Football, NBA, etc.), international blockbuster movies and music and entertainment programmes. There also continues to be significant demand for local (e.g. Masterchef Malaysia) and regional (e.g. Korean drama) content.[175]

14.3 The bulk of local content has traditionally been broadcast over FTA channels. However, the MCMC notes the growing portfolio of local content that is now being aired over pay TV channels. For example, Astro states in its Annual Report 2013 that its broadcast of 'Adam & Hawa', a local TV drama produced by Astro, drove an increase in HD uptake by 120,000 during the telecast of the series and recorded over 1.2 million viewers on television.[176]

14.4 The Minister of Information, Communications and Culture of Malaysia has identified the following events as 'Sports Events of National Significance' which FTA providers must be given an opportunity to broadcast on reasonably agreed negotiated terms:

(a) Olympics;

(b) Commonwealth Games;

(c) Asian Games;

[175] Astro Malaysia Holdings Berhad, *Annual Report 2013* at page 72-81.
[176] Astro Malaysia Holdings Berhad, *Annual Report 2013* at page 73.

(d) SEA Games;

(e) SUKMA Games;

(f) various badminton events (e.g. the BWF Super Series held in Malaysia); and

(g) various football events (e.g. the semi-final and final of the Malaysian Super League, ASEAN Football Championship matches involving the Malaysian national team, semi-final and final of the FIFA World Cup, etc.).

14.5 In Malaysia, licensed content providers typically deliver multiple linear television channels. For FTA providers these channels typically will be general content channels, but for pay TV providers such as Astro each of these channels typically conforms to a particular genre or subject matter (e.g. news or sport). This content may be provided by means of linear television, playback, catch-up or as an on-demand service.

14.6 Other sources of content available in Malaysia, such as most short form user-generated content (e.g. YouTube), are typically left to online or alternative content delivery models.

Summary of submissions on market definition

'Premium' and 'ordinary' content

14.7 Several fixed and mobile providers (some of which offer IPTV services) agree with the MCMC's proposal to identify separate markets for premium and ordinary content. One provider notes that this distinction is essential given the importance of being able to show certain high value content to win audience share and subscriber growth.

14.8 Another licensee notes that a majority of 'ordinary' content is readily available on non-exclusive terms (e.g. open access online), but the 'premium' content that is most important to consumers is increasingly only accessible to customers of certain providers.

14.9 On the other hand, another licensee disagrees with the MCMC's proposed separation of 'premium' and 'ordinary' content markets. While the provider acknowledges that such a distinction has been made in some other jurisdictions (as noted in the Market Definition Analysis), the licensee notes that other jurisdictions typically take a case-by-case approach to market definition for content markets and have chosen not to define the market so narrowly where there was no need to do so.

14.10 The provider also submitted evidence from a Nielsen Report[177] to show that 'premium' content, such as live sport and blockbuster movies, did not necessarily attract as many viewers as content from other genres (e.g. drama/series).

[177] AC Nielsen Report of the Top 50 Programmes from February 2013 to January 2014.

14.11 A prominent FTA operator presents an opposing view and claims that it is no longer possible for commercial FTA operators to acquire broadcast rights for important content, such as live sports, due to the revenue imbalance when compared with subscription operators (i.e. advertising and subscription revenue versus advertising revenue only). The FTA operator requests that the MCMC re-introduce or enforce the Ministerial Determination on Sports Events of National Significance. The MCMC believes that the Ministerial Determination continues to have an important constraining effect on behaviour, as discussed further below.

Local content

14.12 Several licensees also consider local content to be in a separate market. One operator notes that identifying a separate market would help ensure that no one party can dominate the creation and distribution of local content. However, the operator also notes that regulating a separate local content market may ultimately result in poorer production quality as incentives for investment are also removed. Another operator notes that local producers will often be forced to look to the largest distributor (e.g. satellite) to net the largest fees in order to produce content that is able to compete with counterparts in Hollywood and Bollywood.

14.13 On the other hand, a subscription television provider and a prominent FTA operator both submit that the MCMC should not further separate out additional markets for the acquisition of other forms of content (including local content and user generated content), as there is no basis or need to do so at this time. The subscription provider notes that there are currently no case precedents in other jurisdictions where a separate market has been defined for local content. This position is also supported by a prominent mobile provider.

OTT content services

14.14 Several licensees would support the inclusion of OTT services in the market for content acquisition. One licensee notes that with further liberalisation of the internet, many Malaysians will expect OTT services to be available. This will mean that these OTT providers will be viable substitutes for local FTA and subscription television providers. As such, these OTT services should be considered in the Market Definition Analysis. Other examples that were provided to support this position include Youku (a Chinese video hosting service) and Tonton (Media Prima's local OTT platform) which are currently available to Malaysian viewers.

14.15 On the other hand, other licensees do not consider OTT content providers such as Netflix and Hulu entering the Malaysian market in the foreseeable future due to the stringent content regulations that are in place (e.g. censorship). As such, these licensees do not support the inclusion of OTT services in the market for content acquisition at this time.

14.16 A prominent FTA operator claims that, while OTT services will continue to grow (particularly given the rollout of the HSBB network), these services cannot be viewed as a complete substitute for traditional broadcasting at this time and instead should be treated as an alternative to FTA and subscription television services. The operator notes that ordinary content is likely to shift from FTA to OTT delivery as viewer behaviours change, but the broadcast of live events and other niche services (e.g. PPDR and large scale access simultaneously) still remain in the domain of the traditional broadcasters.

MCMC findings on market definition

'Premium' and 'ordinary' content

14.17 The MCMC received mixed submissions on its proposal to define separate markets for the acquisition of 'premium' and 'ordinary' content.

14.18 The MCMC notes the evidence that was provided by a subscription television provider to show that 'premium' content, such as live sport and blockbuster movies, do not attract a greater number of viewers than other forms of content (e.g. drama/series) in Malaysia.

14.19 However, the MCMC notes that the amount of time spent viewing a genre of program may not necessarily provide an accurate depiction of a person's viewing preferences. For example, a drama series may be broadcast daily, while a popular sports event (e.g. a big EPL match) may be a once-off event that last only a few hours. Based on this simple example, the MCMC notes that in many cases a viewer may prefer watching the sports match even though the duration of the event is relatively short, which is why these forms of content have been labelled as 'premium' content.

14.20 The subscription provider also gave examples from other jurisdictions where authorities decided against making a ruling on a possible distinction between 'premium' and 'ordinary' content.[178] The MCMC acknowledges these rulings, but also points to other international cases where intervention was deemed necessary to ensure the rights to 'premium' content were not locked-in by a particular provider. For example, as discussed in the Market Definition Analysis,[179] the IDA in Singapore currently regulates access to EPL football.

14.21 Further, the MCMC notes that a number of licensees appear to agree with the proposed separation of 'ordinary' and 'premium' content acquisition markets. A prominent FTA broadcaster and an IPTV provider both note that the ability to offer certain 'premium' content is crucial to their ability to compete for viewers in the Malaysian broadcasting market.

[178] For example, the subscription provider notes that in *News Corp / Premiere Case No. COMP/M.5121*, the EC states: "it is not necessary to conclude as to whether it must be further sub-divided into markets for the acquisition/licensing of (i) feature films; (ii) other TV content and (iii) TV channels or whether, within the feature films category, it is necessary to further distinguish between the different exhibit windows or between US-produced and other films since, under any possible definition, the transaction does not raise any competition concerns."

[179] See: discussion on ''Product dimension' under section 4 of Part D of Market Definition Analysis.

14.22 The MCMC would point out that content is not free and that there are significant benefits derived by those sports that are paid for the rights to broadcast their sports. Accordingly, any entry into content related markets will not be costless and licensees are expected to compete for and pay for content. Nevertheless, the MCMC also notes that there is a selection of content that has a high public interest component. This content with a high level of public interest is likely to support a finding of a premium content market where "premium" correlates with content in which there is a high public interest.

14.23 Therefore, the MCMC proposes to maintain its distinction between 'premium' and 'ordinary' content when defining the content acquisition markets in Malaysia.

Local content

14.24 In the Market Definition Analysis, the MCMC sought feedback on whether licensees thought that a separate content acquisition market for 'local' content should be recognised.

14.25 The MCMC received a mixed response on this issue from licensees. Those in favour of finding a separate 'local' content market argued that this was necessary to ensure that no one party could dominate the creation and distribution of local content. As discussed above, the MCMC notes the statistics provided by a subscription television provider which showed that certain forms of 'local' content (e.g. Malaysian drama series) can draw significant viewership numbers. Thus, the fear that certain providers may be able to lock-up access to popular forms of 'local' content is a concern that is shared by the MCMC.

14.26 On the other hand, the MCMC also notes the potential drawbacks of defining a separate 'local' content market. For example, regulating a separate local content market could result in poorer production quality as incentives for investment are removed. The MCMC also accepts that determining 'local' content as a separate market does not appear to have strong international grounding at this time.

14.27 For these reasons, the MCMC is of the view that the definition of a separate 'local' content acquisition market is not necessary at the moment. The MCMC notes that this position is supported by both a prominent subscription television provider and a prominent FTA operator.

OTT content services

14.28 The MCMC notes that most licensees agreed with the inclusion of OTT service providers in the markets for 'ordinary' and 'premium' content services. These licensees provided examples of local (e.g. Tonton) and foreign (e.g. Youku) OTT services that are already in place, as well as examples of large foreign OTT providers (e.g. Netflix and Hulu) that are likely to enter the Malaysian market at some point in the future.

14.29 In the Market Definition Analysis, the MCMC already recognises that IPTV providers are likely to bid with FTA and subscription providers for content when it states:

> *"To be clear, the MCMC will consider content services that are provided over IPTV as being included within this market. Although these services use an internet-based mode of delivery, they often require a subscription and offer similar long form content as FTA and subscription providers."*[180]

14.30 Therefore, based on the positive feedback from respondents, the MCMC will continue to consider OTT service providers in relation to the content acquisition markets.

14.31 IPTV as a broadcasting medium is discussed further above in section 13 in relation to the broadcasting services markets.

MCMC findings on content acquisition markets

14.32 For the above reasons, the MCMC will maintain its earlier position and identify separate national markets for the acquisition of premium content and ordinary content.

14.33 The market for premium content would include the acquisition of certain popular live sporting events (e.g. EPL) and blockbuster movies, while the market for ordinary content would include any other content that is not generally considered to be "premium" content (other than short form and user-generated content).

14.34 In response to licensees' comments, the MCMC will not define a separate market for local content at this time.

Assessment of dominance

14.35 The content services market is characterised by complex chains of production and supply, with trade taking place at a variety of levels. The potential for anti-competitive effects due to leveraging across the chain of production should be recognised. Therefore, it is important to consider the interplay between the various levels of the supply chain when considering the following assessment of dominance.

Market structure and the nature of competition

14.36 For the financial year ended 31 January 2013, Astro's total revenue was reported at RM 4,264,967,000.[181] This amount is significantly above what other FTA providers reported over the same time period. For example, Media Prima reported annual revenue in the same year 2013 of RM

[180] See: para 4.41 of section 4 of Part D of Market Definition Analysis.
[181] Measat Broadcast NetworksSystems (Astro), *Annual Report 2013.*

1,722,943,000 (with only RM 727,769,000 coming from its TV networks business).[182]

14.37 Similarly, the MCMC notes that Astro's profits are also significantly greater than those reported by FTA providers. For example, in 2013, Astro reported a profit before tax of RM 522,300,000[183] and Media Prima reported a profit before tax for its television business of RM 180,356,000.[184]

14.38 Astro's profitability is likely to be attributed to a growing number of pay TV subscribers in Malaysia. As of 2013, the total number of pay TV subscriptions in Malaysia was estimated at approximately 3,865,000, which equates to a penetration rate of 55.7%.[185] There were also approximately 658,000 IPTV subscriptions across Malaysia over the same period.[186]

14.39 Astro submits that its market share in 2013 for broadband and subscription television revenues was [c-i-c]. However, the MCMC notes that the market currently under consideration does not include broadband revenues. Therefore, the market share that was estimated by Astro appears to be low for the purposes of this analysis.[187]

Ability to acquire rights to premium content – buying power

14.40 The MCMC views the following content acquirers as potentially being in competition with one another to acquire content:

(a) FTA television providers;

(b) subscription television providers; and

(c) IPTV providers.

14.41 Each of these content providers compete against one another to acquire the rights to show 'premium' and 'local' content. The MCMC notes that what tends to occur is the provider with strong financial resources is able to regularly outbid other providers (particularly premium content).

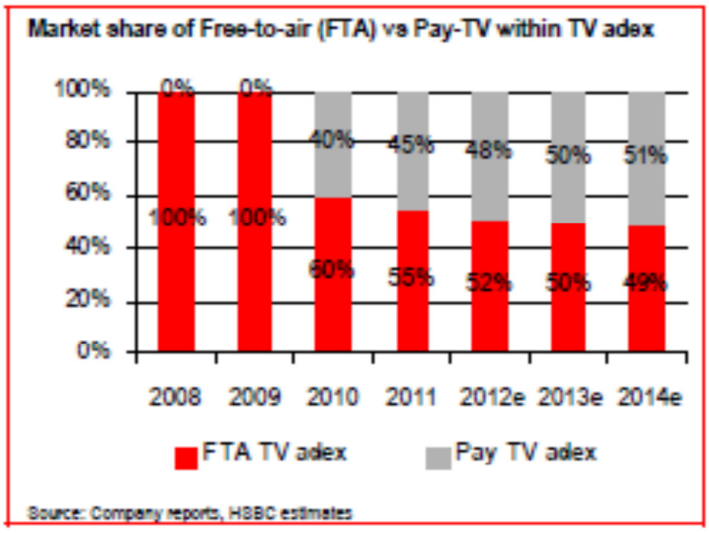
14.42 In Malaysia, Astro has substantially higher purchasing power than the individual FTA operators. As discussed above, Astro's total revenue and profits last year were significantly above the revenue and profits reported by other FTA providers for the same period. This does not preclude competition between Astro and the FTA operators, but it does indicate a higher level of purchasing power exists with Astro. For example, based on the above figures for the 2013 financial year, Astro's total revenue was almost six-times greater and its total profits nearly three times greater than the television broadcasting revenues and profits reported by the largest FTA provider in Malaysia.

[182] Media Prima Berhad, *Annual Report 2013*.
[183] Astro, *Annual Report 2013* at page 22.
[184] Media Prima Berhad Investor Briefing, Financial & Business Review for the 12 – month period ended 31 December 2013.
[185] MCMC, *Communications and Media Pocket Book of Statistics (Q4 2013)* at page 35.
[186] MCMC, *Communications and Media Pocket Book of Statistics (Q4 2013)* at page 36.
[187] Astro Questionnaire Response at 1.10(b).

14.43 The MCMC notes that the number of digital FTA channels will be increasing from the existing 8 channels up to 30 channels in 2015. However, this is unlikely to have a significant impact on the field of rivalry between Astro and the FTA providers. While advertising revenues may increase slightly with the prospect of increased viewership, total revenue is expected to remain relatively constant for the foreseeable future. In fact, advertising revenues would be divided amongst a larger number of channels, so there is the potential for FTA revenues on a per channel basis to decline over time.

14.44 The MCMC notes that there has been a transfer of advertising dollars from FTA to pay TV providers between 2008 to 2014 as illustrated in the following figure:

Figure 10: Market share of FTA vs Pay TV within TV adex (2008-2014)



14.45 The MCMC also notes that, while IPTV revenues remain relatively small compared to Astro and the larger FTA providers, this may change over time. In particular, the MCMC recognises the importance of monitoring some of the larger IPTV providers (e.g. Telekom Malaysia) who have the ability to leverage their strong financial position in other markets to attempt to aggressively gain market share in the broadcasting services markets. One licensee gives the Singaporean example of SingTel outbidding StarHub for the rights to broadcast the 2014 FIFA World Cup to illustrate this point.

14.46 The area in which these financial resources are most distinct is in relation to the acquisition of 'premium' content. The MCMC notes that content providers are seeking to differentiate their offerings by providing premium

content, such as live sporting events (e.g. EPL) and blockbuster movies, often on an exclusive basis.

14.47 For these reasons, the MCMC considers that Astro's much stronger financial position in relation to the FTA providers (and, to a lesser degree, the IPTV providers) is likely to give the subscription television provider a significant advantage in its ability to acquire premium and ordinary content. This position appears to be supported by both FTA providers[188] and IPTV providers.[189]

Ability to access premium content – exclusivity agreements

14.48 A further issue that was raised by various content providers was the use by content providers of exclusivity agreements to acquire and lock out access to certain premium content. The providers all pointed to the long term agreements that Astro was frequently able to enter into for premium content (e.g. EPL) due to its superior financial standing (as discussed above).

14.49 The MCMC notes that the effect of exclusive access to premium content has been an area of growing concern in other jurisdictions. For example:

(a) in the United Kingdom, Ofcom imposed ex ante wholesale obligations on BSkyB for access to particular live sporting events, in particular the English Premier League. Although these obligations were later withdrawn on appeal, Ofcom recently initiated a new investigation on this issue in response to continuing complaints from British Telecom;[190]

(b) in Singapore, the Media Development Authority (**MDA**) imposed cross-carriage measures to regulate cases where content exclusivity was viewed as limiting competition in the pay TV market;[191] and

(c) in Australia, the ACCC noted the importance of operators having access to "compelling" content to effectively compete for viewers in a recent competition assessment of the proposed merger between Foxtel and Austar.[192]

14.50 The MCMC notes that exclusivity is often imposed by content providers to attract a premium for their content and that content acquirers sometimes have little or no influence over content rights providers in this respect. Nevertheless, it is also true to say that exclusive access to content when combined with higher degrees of purchasing power and long term, enduring relationships, continues to have a significant effect on behaviour within the content acquisition market in Malaysia.

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[188] For example, see: FTA provider Questionnaire Response at 6.
[189] For example, see: IPTV provider Questionnaire Response at 3.14 and IPTV provider Questionnaire Response at 3.1.
[190] The Guardian, BSkyB investigated over BT claim it is withholding Sky Sports package (20 June 2013) available online at: < http://www.theguardian.com/media/2013/jun/19/bskyb-bt-sky-sports-youview-premier-league>
[191] See: MDA, Code of Practice for Market Conduct in the Provision of Media Services (2010).
[192] ACCC, *Public competition assessment – Foxtel proposed acquisition of Austar United Communications Limited* (14 June 2012) at 49.

14.51 Telekom Malaysia also raised the issue regarding its inability to access content for its new HyppTV service.[193] Similarly, Media Prima identified the inability to access sports content (international as well as local) as a continuing challenge for FTA providers due to pay TV operators outbidding and acquiring exclusive rights to the content.[194]

14.52 The MCMC notes that the Ministerial Determination on Sports Events of National Significance was issued in 2012. While some submitters said that the determination has had limited effect to date given that pay TV providers had already entered into long term exclusivity agreements for the content in question,[195] the MCMC considers that the Ministerial Determination could have a significant constraining effect on behaviour, similar to the constraining effect of potential further regulation in this area. That is, the Ministerial Determination serves as an important deterrent.

14.53 The MCMC also notes that Astro licenses some of its content to other broadcasters to defray costs.[196] This sub-licensing arrangement may assist to also address downstream competition issues, depending on the extent of such sub-licensing and the type of content which is subject to sub-licensing.

14.54 The MCMC's preliminary view is that Astro is likely in a position of dominance in the market for the acquisition of premium content due to its ability to use its superior financial resources to acquire the exclusive rights to premium content.

14.55 However, the MCMC recognises that the content acquisition market for 'premium' content is ultimately subject to the countervailing power of content rights owners. For example, Astro submits that its content costs rose by [c-i-c] and [c-i-c] in FY13 and FY14 on a year-on-year basis,[197] which was largely attributable to the increasing bargaining power of content providers and content rights owners in the negotiation of long term exclusivity agreements.

Acquisition of ordinary content

14.56 The bulk of local content has traditionally been broadcast over FTA channels. Media Prima claims to invest heavily in local content through the outsourcing of its drama series and telemovies to local producers and the internal production of entertainment, news and current affairs.[198] However, Media Prima also notes its declining ability to produce and acquire quality local content due to declining advertising revenues (as discussed above in relation to acquisition of premium content).[199]

14.57 The MCMC also notes the growing portfolio of local content that is now being aired over pay TV channels. For example, Astro states in its Annual

[193] Telekom Malaysia Questionnaire Response at 3.14.
[194] Media Prima Berhad Questionnaire Response at 5(b).
[195] Media Prima Berhad Questionnaire Response at 6(c).
[196] Astro Questionnaire Response at 1.4.
[197] Astro Response to Informal Consultation at pages 24-25.
[198] Media Prima Berhad Questionnaire Response at 1.2(j).
[199] Media Prima Berhad Questionnaire Response at 6(c).

Report 2013 that its broadcast of 'Adam & Hawa', a local TV drama produced by Astro, drove an increase in HD uptake by 120,000 during the telecast of the series and recorded over 1.2 million viewers on television.[200]

14.58 One licensee submitted to the MCMC that the majority of 'ordinary' content is now readily available on non-exclusive terms. While the MCMC notes that short form and user generated content is excluded from this analysis, many forms of 'ordinary' content have become increasingly accessible for all FTA, subscription and OTT broadcasters to offer their viewers.

14.59 The MCMC's preliminary view is that the market for the acquisition of ordinary content remains relatively competitive, particularly when compared with 'premium' content acquisition. However, the MCMC welcomes further comments on this particular issue.

Barriers to entry or expansion

14.60 The barriers to entry or expansion in the FTA and pay TV broadcasting markets are set out in section 13 above.

14.61 In addition, the MCMC considers that the following barriers to entry and expansion are also likely to apply for the content acquisition markets:

(a) Buying power. As discussed above, the ability to acquire content often directly equates with a provider's financial resources to outbid its competitors. Therefore, a potential competitor is likely to have difficulty establishing itself in the market if it does not have the financial resources necessary to compete. The Ministerial Determination, and the threat of future regulation, also has an important constraining effect on large buyers of content.

(b) Contractual restrictions. The existence of long term supply contracts in a market can constitute a barrier to entry if it prevents or restricts potential entrants from accessing key inputs or customers. As discussed above, Astro has entered into a number of exclusivity agreements with content providers, which may prevent potential market entrants from accessing premium (and some ordinary) content. However, the MCMC notes that Astro sub-licenses some of its content to other broadcasters, which may assist in lowering the barriers to entry.

(c) Regulatory and legal requirements. The Ministerial Determination on Sports Events of National Significance is likely to restrict the ability of certain providers from acquiring the rights to the sporting events that are listed in the Determination and hence constrains the dominance of those providers to a certain degree.

(d) Economies of scale and scope. Astro notes that negotiations for content deals will typically differ depending on the scope of the

[200] Astro Malaysia Holdings Berhad, *Annual Report 2013* at page 73.

contract for the supply of content and the platforms over which the content will be supplied (among other things).[201] Similarly, Media Prima also attempt to achieve bulk discounts where possible when acquiring content.[202] Presumably this would serve to limit smaller providers from competing with larger providers which are able to offer content providers significantly greater viewership across a larger number of platforms.

14.62 The MCMC considers that barriers to entry and expansion in the market for the acquisition of premium content is likely to be high, particularly where a potential entrant does not have the financial resources necessary to outbid larger providers.

14.63 However, the MCMC notes that the above barriers to entry or expansion are likely to be lower for the acquisition of ordinary content.

Preliminary finding on dominance

14.64 The MCMC's preliminary view is that Astro is likely to be in a position of dominance in the market for the acquisition of premium content due to its strong financial resources to acquire the exclusive rights to premium content.

14.65 The MCMC's preliminary view is that the market for the acquisition of ordinary content remains relatively competitive at the moment. However, the MCMC welcomes further comments on this particular issue.

Question 14

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you agree with the preliminary finding on market share?
(c) How do you think the transition to digital broadcasting is likely to impact competition in the content acquisition market?
(d) Do you agree with the MCMC's preliminary view that the market for the acquisition of ordinary content is relatively competitive at the moment?
(e) Do you agree or disagree with the MCMC's preliminary finding on dominance?

15 Termination (fixed and mobile) calls and messages

Market overview

15.1 In Malaysia, there are several fixed and mobile networks in respect of which terminating access is required to facilitate any-to-any connectivity.

[201] Astro Questionnaire Response at 1.9(b).
[202] Media Prima Berhad Questionnaire Response at 5(c).

15.2 Fixed call termination is facilitated by the Fixed Network Termination Service which is on the Access List and is described as follows:

> *"Fixed Network Termination Service is an Interconnection Service provided by means of a Fixed Network for the carriage of Call Communications from a POI to a 'B' party. The Fixed Network Termination Service comprises transmission and switching (whether packet or circuit) for Fixed Network-to-Fixed Network, Mobile Network-to-Fixed Network and incoming international-to-Fixed Network calls and messages which require Any-to-Any Connectivity."*[203]

15.3 Mobile call termination is facilitated by the Mobile Network Termination Service which is on the Access List and is described as follows:

> *"Mobile Network Termination Service is an Interconnection Service for the carriage of Call Communications from a POI to a 'B' party. The Mobile Network Termination Service supports Mobile Network-to-Mobile Network, Fixed Network-to-Mobile Network and incoming international-to-Mobile Network calls and messages which require Any-to-Any Connectivity."*[204]

15.4 Fixed termination rates and mobile termination rates are regulated in Malaysia and are set out in the MCMC's Access Pricing Determination.[205]

15.5 According to the interconnect model that applies in Malaysia, the network operator that originates the call is generally required to purchase terminating access from the network operator that terminates the call. The originating network operator then recovers these costs from its customers in the price it charges them for making the call. The terminating network operator does not charge its customers for receiving the call.

15.6 SMS termination is supported by the Mobile Network Termination Service that is described above in relation to mobile call termination services.

Summary of submissions on market definition

15.7 Most fixed and mobile operators appear to support the MCMC's proposal to define separate wholesale markets for fixed and mobile network termination.

15.8 One mobile operator also suggests that the MCMC explore the usefulness of facilitating a transit interconnection service for domestic telephony. The operator notes that this could help reduce costs for new entrants and smaller operators (e.g. build less POIs) and would support

[203] *MCMC Determination on Access List, Determination No.1 of 2005 (as amended by Determination No. 1 of 2009).*
[204] *MCMC Determination on Access List, Determination No.1 of 2005 as amended by (Determination No. 1 of 2009).*
[205] *MCMC Determination on the Mandatory Standard on Access Pricing, Determination No. 1 of 2012.*

inbound/outbound international telephony traffic where there are often fewer bilateral agreements in place with foreign operators.

15.9 Another operator considers that separate markets should exist for:

(a) Wholesale terminating SMS and MMS services. MNOs have exclusive control of SMS and MMS termination with the same competitive issues as MNO's exclusive control over voice termination services. A temporal dimension should be considered to account for substitution of OTT messaging services in the future for SMS messaging services.

(b) Wholesale terminating international roaming services. Similar to the domestic termination of voice calls, the MNO has exclusive control of the access to its end users for the termination of roaming voice calls (which are routed through its network to end users).

15.10 A prominent mobile operator claims that, due to the impact of OTT messaging applications on SMS/MMS messaging services, the operator does not think that there is a requirement to include SMS/MMS termination in the definition of mobile termination.

MCMC findings on market definition

15.11 Based on the submissions received, the MCMC notes that both fixed and mobile licensees appear to broadly support the MCMC's proposed separation of wholesale markets for fixed and mobile network termination.

15.12 The issue of contention appears to be with the proposed definition of a separate SMS termination market. In particular, the MCMC notes one mobile operator's claim that a separate SMS termination market is not necessary given the increasing impacts of OTT messaging services on the industry. These data-based messaging services are not subject to traditional forms of mobile network termination.

15.13 For a more detailed discussion on the MCMC's stance on the substitutability of OTT messaging services and SMS messaging services, refer to section 5 of Part B above. In summary, the MCMC now considers that traditional SMS and data-based messaging services are viable substitutes and form part of a single mobile messaging services market.

15.14 Despite the inclusion of OTT services in the mobile messaging services market, the MCMC considers that a separate and distinct market is still necessary for SMS termination. The MCMC accepts that there may be some substitutes for originating messages. For example, an end user may choose to message another user by means of an SMS over the mobile telephony network or by one of the various data-based messaging services that are available. However, once the user decides to send an SMS message (as opposed to an OTT message), the termination of that SMS message is set and the ability of a rival network operator to act as a substitute is

constrained. Thus, the MCMC considers it important to include a separate market for SMS termination.

15.15 For these reasons, the MCMC will continue to consider the termination of each call and SMS over an operator's network as a separate relevant market. Termination markets will be defined separately at the wholesale level for:

(a) each fixed network; and

(b) each mobile network.

Assessment of dominance

Fixed and mobile call termination

15.16 In functional terms, termination applies in much the same way for fixed and mobile calls. As such, the following discussion will refer to call termination more broadly and the conclusions will apply equally to fixed and mobile call termination markets.

15.17 When a call is made to a specific subscriber and that person is on another network, there is a clear expectation that the call will reach the intended subscriber. Therefore, the originating network operator has no option other than to terminate its call on the terminating operator's network. While some operators might offer transit services, ultimately these transit operators also need to negotiate with the terminating network operator to terminate calls which transit over the transit operator's network.

15.18 For these reasons, the MCMC considers each fixed and mobile operator with a network to be a monopoly supplier for the provision of call termination services on its network. This effectively means that each fixed or mobile provider is dominant in the market for call termination on its own network.

15.19 This position is supported by the EC which views each termination to a particular end user as a separate market with the operator holding "significant market power" (a similar concept to dominance) over any calls terminating on its network.[206]

SMS termination

15.20 Operation of the call termination services described above applies in a similar manner for SMS termination.

15.21 When an end user on one network sends an SMS to an end user that is connected to another network, the terminating network operator is required to provide a termination service to the originating network operator in order to facilitate any-to-any connectivity of that service. The originating network operator may then charge its end user for sending the SMS. The terminating network operator will not charge its customer for receiving the

[206] Ecorys, *Future electronic communications markets subject to ex-ante regulation: final report* (18 September 2013) page 100.

SMS, but will charge the originating network operator a SMS termination fee.

15.22 The MCMC notes that end users now have a number of options for originating a text message. These services include many of the available OTT services that are now widely available, such as WhatsApp and Blackberry Messenger. However, as discussed above, the MCMC notes that once an end user decides to send an SMS message (as opposed to an OTT message), the termination of that SMS message is fixed and the ability of a rival network operator to act as a substitute is constrained.

15.23 Therefore, the MCMC takes the view that each mobile operator with a network should be considered a monopoly supplier for the provision of SMS termination services on its network. In effect, this will mean that each mobile provider is dominant in the market for SMS termination on its own network.

Preliminary finding on dominance

15.24 The MCMC considers each fixed and mobile operator with a network to be a monopoly supplier that is dominant in the market for call termination on its own network.

15.25 The MCMC also views each mobile operator with a network as a monopoly supplier that is dominant in the market for SMS termination on its network.

Question 15

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?

(b) Are existing regulatory instruments able to constrain the ability of interconnection service providers from abusing their position of dominance in the markets for call and SMS termination?

(c) Do you agree or disagree with the MCMC's preliminary finding on dominance?

16 Origination (fixed and mobile) calls

Market summary

16.1 In Malaysia, most call origination is provided directly to end users as part of their retail package of calling services.

16.2 Some limited services may require wholesale originating services to be provided, namely calls to freephone 1800, toll free 1300 number services and other similar services. 1800 and 1300 services are a popular way for business and government customers to provide end users in Malaysia with access to their call centres and other customer services.

16.3 Fixed call origination to these services is facilitated by the Fixed Network Origination Service which is on the Access List and is described as follows:

> *"Fixed Network Origination Service is an Interconnection Service provided by means of a Fixed Network for the carriage of Call Communications from a 'A' party to a POI. The Fixed Network Origination Service comprises transmission and switching (whether packet or circuit) for Fixed Network-to-Fixed Network, Fixed Network-to-Mobile Network and Fixed Network-to-international outgoing calls insofar as they relate to freephone 1800 number services, toll free 1300 number services and other similar services which require Any-to-Any Connectivity."*[207]

16.4 Mobile call origination to these services is facilitated by the Mobile Network Origination Service which is on the Access List and is described as follows:

> *"Mobile Network Origination Service is an Interconnection Service for the carriage of Call Communications from a 'A' party to a POI. The Mobile Network Origination Service supports Mobile Network-to-Mobile Network, Mobile Network-to-Fixed Network and Mobile Network-to-international outgoing calls insofar as they relate to freephone 1800 number services, toll free 1300 number services and other similar services which require Any-to-Any Connectivity."*[208]

16.5 Fixed origination rates and mobile origination rates are regulated in Malaysia and are set out in the MCMC's Access Pricing Determination.[209] Different rates apply to the Fixed Network Origination Service for calls with the prefix 0154 which originate on networks based on IP.

Summary of submissions on market definition

16.6 A prominent fixed network operator does not consider it necessary to have a separate national wholesale market for call origination on each fixed and mobile network. However, the MCMC notes that most other operators support the current position set out in the Market Definition Analysis.

MCMC findings on market definition

16.7 The MCMC notes that almost all submissions that were received agreed with the MCMC's preliminary view on the markets for fixed and mobile origination as set out in the Market Definition Analysis.[210]

[207] *MCMC Determination on Access List, Determination No.1 of 2005 (as amended by Determination No. 1 of 2009).*
[208] *MCMC Determination on Access List, Determination No.1 of 2005 (as amended by Determination No. 1 of 2009).*
[209] *MCMC Determination on the Mandatory Standard on Access Pricing, Determination No. 1 of 2012.*
[210] See: section 3 of Part E of the Market Definition Analysis.

16.8 Only one licensee does not consider it necessary to have a separate national wholesale market for call origination on each fixed and mobile network. However, the MCMC notes that no further explanation or arguments were provided by the licensee to support this position.

16.9 Therefore, the MCMC maintains its original position that each origination over each fixed and mobile network in Malaysia should be viewed as a separate wholesale market.

Assessment of dominance

16.10 While fixed and mobile call origination are defined as existing in separate wholesale markets, origination over each network has the same basic characteristics. Therefore, the following dominance assessment will apply to both fixed and mobile call origination services.

16.11 For the most part, once a consumer chooses a service provider they are effectively locked-in to that provider's network. This means that 1800 or 1300 services will only be accessible if the originating network operator permits originating access or is required to provide originating access to the 1800 or 1300 provider.

16.12 The MCMC notes that some substitutes for originating calls may be possible (but not likely). For example, an end user may have the choice of calling a 1800 or 1300 service from a fixed line at their workplace, a mobile telephone or a fixed line at their home. However, the ability of a rival network operator to act as a substitute is ultimately constrained by the fact that once a consumer selects a particular network, no other network operator may originate calls on its network for that particular consumer from that particular service.

16.13 Therefore, the MCMC considers each fixed and mobile operator with a network to be a monopoly supplier for the provision of call origination services from their network. This effectively means that each fixed or mobile provider is dominant in the market for call origination from its own network.

16.14 The MCMC considers that the continued regulation of call origination services will be important:

(a) to promote any-to-any connectivity; and

(b) to prevent larger network operators from withdrawing access to the service or offering it on unreasonable terms.

This position was recently supported by the Australian Competition and Consumer Commission (**ACCC**) in Australia.[211]

Preliminary finding on dominance

[211] ACCC, *Fixed services review – Discussion paper on the declaration inquiry* (July 2013) at 4.3.

16.15 The MCMC considers each fixed and mobile operator with a network to be a monopoly supplier that is dominant in the market for call origination from its own network.

Question 16

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you have any data to support a calculation of market share?
(c) Are existing regulatory instruments able to constrain the ability of interconnection service providers from abusing their position of dominance in the market for call origination?
(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

17 Inter-connect links

Market overview

17.1 There are multiple networks in Malaysia that need to be physically inter-connected in some way for end users to be able to communicate between the different networks. The inter-connect link is a key service that facilitates such a connection between two networks.

17.2 The Interconnect Link Service is on the Access List and is described as follows:

> *"An Interconnect Link Service is a Facility and/or Service which enables the physical connection between the network of an Access Provider and the network of an Access Seeker for the purpose of providing an Interconnection Service..."*[212]

17.3 The maximum prices that may be charged for Inter-connect Link Services are currently set out in section 8(e) of the Mandatory Standard on Access Pricing.[213] Network operators are free to commercially negotiate pricing for each inter-connect link service, as long as they do not exceed the maximum regulated prices. These negotiations will typically be conducted in relation to each individual point of interconnection.

17.4 The ability for network operators to physically interconnect their respective networks is essential to ensure end-to-end connectivity for end users. Without an effective interconnection access regime in place, it would be possible for an incumbent operator to leverage its dominant position to prevent interconnection with smaller competitors.

[212] *MCMC Determination on Access List, Determination No.1 of 2005 (as amended by Determination No. 1 of 2009).*
[213] *Commission Determination on the Mandatory Standard on Access Pricing – Determination No. 1 of 2012*, section 8(e).

Summary of submissions on market definition

17.5 Several operators support the inclusion of co-location services within the market for inter-connect link services, rather than having separate markets for both services.

17.6 One network operator also notes that the majority of interconnection services are affected by in-span/mid-span interconnection (less than 10% of all services are not in-span). The operator notes that mid-span remains the preferred form of interconnection by market participants.

17.7 Another operator notes for in-span inter-connect link services, the fibre connectivity between two operators typically do not need co-location services. However, for full span the access provider requires co-location in the access seeker's premises.

MCMC findings on market definition

17.8 The MCMC notes that some licensees would prefer that the proposed market for inter-connect link services be amalgamated with the market for access to exchange buildings and co-location. The MCMC also recognises that these two services are often closely related and offered in close proximity.

17.9 However, the MCMC still considers it important to have a separate market for inter-connect link services as it is not always necessary for these services to occur in tandem with co-location. For example, one operator noted that fibre connectivity between two operators typically does not require co-location for in-span inter-connect link services.

17.10 The MCMC has updated its position on the geographic dimension of the market for inter-connect link services. The MCMC now considers that operators are more likely to make commercial decisions in relation to a particular point of presence on a link-by-link basis, rather than on a national basis. This follows from the earlier discussion in the Market Definition Analysis,[214] where the MCMC noted that inter-connect links are specific to a particular point of presence on the network with no feasible substitutes available for linking to that particular point. As such, inter-connect links will now be viewed as having an individual market with boundaries that align with the particular point of presence (e.g. exchange) on the network where the interconnection point is located.

17.11 The MCMC considers there to be a separate market for inter-connect link services that operates on a link-by-link basis at the wholesale level of the supply chain.

[214] See: discussion on 'Geographic dimension' under section 5 of Part E of Market Definition Analysis.

Assessment of dominance

Market structure and the nature of competition

17.12 As discussed in the Market Definition Analysis,[215] the MCMC does not consider there to be any viable substitutes for inter-connect links. For this reason, the MCMC concluded that inter-connect links should be considered a form of natural monopoly.

17.13 In effect, this means that each network operator will be viewed as dominant in the inter-connect link market for each point of presence along the operator's own network.

17.14 However, the MCMC also notes that access to inter-connect link services is currently regulated by the Access List. The MCMC welcomes comments on the effectiveness of the current Access List in preventing anti-competitive outcomes in relation to inter-connect link services.

Barriers to entry

17.15 The MCMC notes that it may be possible for a third party to provide the inter-connect link in circumstances where two operators are unable to reach agreement for a direct interconnection between their networks.

17.16 However, the MCMC also notes that the third party would still need access to the exchange. Therefore, a network operator could use its dominant position to deny both the initial operator and the third party interconnection to its network.

17.17 The natural monopoly associated with the inter-connect link service would serve as a natural barrier to entry for any party wishing to enter the market.

Preliminary finding on dominance

17.18 The MCMC considers each inter-connect link on an operator's network to be a form of natural monopoly. Therefore, each operator with a network will be viewed as dominant in the inter-connect link market for each point of presence along the operator's network.

17.19 The MCMC welcomes comments on the effectiveness of the current access regulation in preventing anti-competitive outcomes in relation to inter-connect link services.

Question 17

The MCMC is seeking views on the following:
(a) Do you have any further comments on market definition?

[215] See section 5 of Part E o f Market Definition Analysis.

(b) Do you agree with the MCMC's decision to update the geographic dimension of the market for inter-link services?
(c) Has access regulation been effective in mitigating anti-competitive outcomes in the market?
(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

18 Wholesale internet interconnection

Market overview

18.1 In Malaysia, the Malaysia Internet Exchange (**MyIX**) provides a central space for domestic interconnection between all major service providers. MyIX claims that "at present all major Malaysia Internet Service Providers and Content Providers have established connections with MyIX."[216]

18.2 MyIX offers the following services to its members:

(a) Multilateral Peering Arrangements for interconnection of all MyIX members;

(b) Network Monitoring Systems which monitor and report the utilisation of member traffic;

(c) MyIX Looking Glass services, which allow members to view routing information remotely;

(d) IPv6 migration services; and

(e) a Network Operations Centre for member support services.[217]

18.3 IXPs are commonly formed to facilitate peering. An IXP is a central place where multiple Internet service providers voluntarily agree to interconnect their respective networks. By participating in an IXP, Internet service providers are typically able to exchange traffic without having to buy transit from an upstream provider.[218] This appears to be the form of internet interconnection used in Malaysia.

Summary of submissions on market definition

18.4 A prominent fixed network operator strongly disagrees with a separate market for wholesale internet interconnection. The operator argues that this service is normally part of wholesale broadband and data services. Therefore, wholesale internet interconnection should already be included in the wholesale broadband and data markets. This position is also supported by a prominent mobile operator.

[216] See: MyIX, *Frequently Asked Questions* (accessed on 10 March 2014) available online at: < http://myix.my/faq-page#t1n144>
[217] See: MyIX, *Our Services* (accessed on 10 March 2014) available online at: <http://myix.my/our-services>
[218] BEREC, *An assessment of IP-interconnection in the context of net neutrality – draft report for public consultation* (29 May 2012) at page 23.

18.5 Another operator notes that, while the definition of a wholesale internet interconnection market between licensed ISPs can be done, there are some challenges that might limit its usefulness. Unlike call termination in the conventional fixed or mobile retail markets where the bulk of traffic is between Malaysian licensed operators, this is less certain for the Internet. A significant portion of Internet traffic lies outside the boundary of Malaysia, hence limiting the usefulness of market definition as a means of regulation. Large ISPs from overseas are not covered in this respect.

18.6 Further, the operator notes that peering is increasingly not between licensed internet service providers. The emergence of key content or applications providers means that often the traffic exchange is to access content and not a conventional subscriber. Content providers like Google (e.g. YouTube, Google Maps, etc.), Facebook and Twitter are increasingly important peering partners.

MCMC findings on market definition

18.7 The MCMC notes that a fixed network operator has requested that the wholesale internet interconnection market be merged with the markets for wholesale broadband and data services. However, the MCMC disagrees and considers these markets to be fundamentally different for the following reasons:

(a) wholesale internet connection refers to the interconnection services that are required for network operators to provide end-to-end transit to allow for full connectivity to the internet; and

(b) wholesale broadband and data services refer to the transmission services themselves that are acquired by operators and ultimately end users to access the internet at the interconnection points.

18.8 In other words, internet interconnection is similar to co-location and inter-connect links for telephony purposes. Wholesale broadband and data services are equivalent to call origination and termination.

18.9 The MCMC also notes the other issues that were raised in relation to wholesale internet interconnection services. In particular, the MCMC accepts that peering with international internet service providers or content providers is not likely to be captured by the proposed market for wholesale internet interconnection (i.e. because these operators are not licensed). However, the MCMC still considers it important to account for the wholesale internet interconnection market, even if such a national market only captures locally licensed providers.

18.10 Therefore, the MCMC considers that a separate market for wholesale Internet interconnection exists in Malaysia.

Assessment of dominance

Market structure and the nature of competition

18.11 The exchange of traffic between networks is fundamental for ensuring communication between users of different networks. Operators are not able to connect to all websites hosted on other networks, which means that each operator is typically required to rely on a series of interconnection agreements and IP traffic exchanges to access their websites which may be located in many different locations.

18.12 The MCMC notes that in some cases it may be possible for a network operator to leverage the size of its network to dictate the interconnection costs that are paid by rival operators. However, the MCMC notes the moderating influence that MyIX has had on facilitating IP-interconnection between Internet service providers of varying sizes and preventing the artificial inflation of costs by the larger network operators.

18.13 The MCMC notes that currently all major network operators in Malaysia are members of MyIX. This makes it less likely that a single operator (e.g. Telekom Malaysia) will be dominant in the market for wholesale internet interconnection as MyIX provides all operators with an alternative means of interconnecting should a larger operator attempt to demand higher interconnection costs.

Barriers to entry

18.14 Entry barriers to this market tend to be relatively low. There is evidence of economies of scale and that the ability to reach traffic exchange or peering agreements may be helped by scale. The MCMC notes that it may be possible for providers to find alternative or substitute routes if network interconnection is prevented on a particular operator's network.

Preliminary finding on dominance

18.15 Due to the moderating influence of MyIX on the market, the MCMC does not consider any operators to be dominant in the market for wholesale internet interconnection.

Question 18

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?

(b) Do you agree or disagree with the MCMC's preliminary finding on dominance?

19 Access to lead-in ducts and manholes

Market summary from Market Definition Analysis

19.1 Access to a particular network or end user location usually involves access through a lead-in duct or point of access.

19.2 A manhole is a hole, usually with a cover, through which a person may enter an underground utility vault used to house an access point for making cross-connections or performing maintenance on underground electronic communications cables.[219]

19.3 The MCMC notes that in Singapore, lead-in ducts and manholes are regulated as Essential Support Facilities.[220]

Summary of submissions on market definition

19.4 The MCMC notes that a representative body for various telecommunications infrastructure providers considers aerial and sewer access as effective substitutes for lead-in duct and manhole infrastructure. This is because the network reaches the whole country and has been in operation as such in some countries.

19.5 This position is also supported by other licensees for reasons such as:

(a) to speed up access implementation;

(b) to reduce local authority intervention as permit application process at the local authority level can be quite lengthy and costly; and

(c) to reduce any unnecessary road hacking and drilling which can cause major disturbance to traffic users and the public more generally.

19.6 However, several other fixed and mobile operators disagree with the inclusion of other forms of access (e.g. sewer or aerial) as substitutes for lead-in duct and manholes. Although it is technically possible for these services to act as a substitute, there is no guarantee of telco-grade safety, security and quality. Furthermore, cables laid in sewers tend to degrade faster and sewer access often belongs to building owners and other unlicensed persons who may not be subject to the CMA.

MCMC findings on market definition

19.7 The MCMC notes that the licensees appear to be divided on whether to include sewer and aerial access as possible substitutes for access to lead-in ducts and manholes.

[219] Ecorys, *Future electronic communications markets subject to ex-ante regulation: final report* (18 September 2013) page 317.
[220] IDA, Code of Practice for Competition in the Provision of Telecommunication Services 2012, section 5.4, Appendix 2, Schedule of Interconnection Related Services and Mandated Wholesale Services.

19.8 Access to lead-in ducts or manholes may be unavailable or on prohibitive terms at times. In these instances, the MCMC accepts that it may be possible for an access seeker to attempt to acquire access by other means (e.g. sewer and aerial access) in some limited circumstances.

19.9 However, in response to licensee comments, the MCMC has decided to update its position to exclude aerial and sewer access from the market for access to lead-in ducts and manholes. In particular, the MCMC notes the arguments raised by licensees in opposition to the inclusion of these alternative forms of access because:

(a) there is no guarantee of telco-grade safety, security and quality of service when using sewer or aerial networks; and

(b) cables laid in sewers tend to degrade faster.

19.10 Further, the MCMC also notes that in many cases sewer or aerial access to an end user premises may not be feasible or desirable.

19.11 For these reasons, the MCMC considers there to be a national market for the wholesale supply of lead-in duct and manhole infrastructure. The MCMC no longer considers that such a market will include aerial or sewer access to end user locations.

Assessment of dominance

19.12 As discussed above, the MCMC does not consider other forms of access (e.g. aerial cabling or sewer facilities) to end user locations to be viable substitutes for access to lead-in duct and manhole infrastructure.

19.13 Therefore, the MCMC will view access to lead-in ducts and manholes as a form of natural monopoly in most cases. The owner of a network location will always control access to that network location usually through the lead-in duct and manhole.

19.14 In effect, this means that an operator with a large fixed-network presence may control access to most end user locations within that operator's network footprint.

19.15 As discussed in previous sections, the MCMC considers Telekom Malaysia to have significant market power in most fixed-line markets due to the substantial size of the Telekom Malaysia fixed network in comparison to competitors. The MCMC considers that the same logic applies in this instance to also find Telekom Malaysia dominant in the market for access to lead-in ducts and manholes.

19.16 The MCMC notes that the inability to access lead-in manholes and ducts is also likely to have competitive effects at other 'layers' of the network. For example, one fixed-line operator identified Telekom Malaysia's control over most ducts and manholes into high rise buildings as a key factor behind the

operator's inability to lay fibre and access end user customers in certain areas.[221]

Barriers to entry

19.17 Self-supply of access to lead-in manholes and ducts may also be a possibility for access to an end user location. However, the MCMC notes that this would not be a likely option due to the high barriers to entry (e.g. sunk costs of capital) and the likelihood that any self-built lead-in duct and manhole would need to be connected to inter-exchange or mainline ducting which, if owned by the access provider, might be refused by the access provider of the inter-exchange or mainline ducting.

Preliminary finding on dominance

19.18 The MCMC's preliminary view is that Telekom Malaysia should be viewed as dominant in relation to the access market that is associated with each network location across the Telekom Malaysia's national network.

Question 19

The MCMC is seeking views on the following:
(a) Do you have any further comments on market definition?
(b) Do you have any data to support a calculation of market share?
(c) Do you agree or disagree with the MCMC's preliminary finding on dominance?

20 Access to inter-exchange and mainline ducts

Market summary from Market Definition Analysis

20.1 Inter-exchange or mainline ducts are ducts used to connect larger exchanges and the main ducts which run down streets and past homes (but not into homes, which are the lead-in ducts). Inter-exchange and mainline ducts are similar to lead-in ducts, except that they provide a conduit for cables that extend between two (or more) exchanges.

20.2 In Australia, the ACCC refers to "duct access services" more broadly, which includes access to an operator's "network of ducts, tunnels, manholes and pits for the purpose of installing and operating access seeker cables and equipment."[222]

20.3 Further, the ACCC also provides more specific examples of the types of services that could be included within the broader "duct access services", including:

[221] Fixed network operator Questionnaire Response at 2.1.
[222] ACCC, *Fixed Services Review Discussion Paper on the Declaration Inquiry* (2013) at page 81.

(a) ducts in which 'External Interconnection Cables' (**EICs**) are provided and ducts holding transmission cables between exchanges within a city; and

(b) lead-in conduits which hold the cable connecting the consumer premises to the local exchange or cabinet.[223] In the Malaysian context, the MCMC will consider these ducts as lead-in ducts as discussed in section 19 above.

Summary of submissions on market definition

20.4 The MCMC notes that a representative body for various telecommunications infrastructure providers considers aerial and sewer access as effective substitutes for inter-exchange and mainline ducts. This is because the network reaches the whole country and aerial and sewer networks are often used as substitutes for inter-exchange and mainline ducts. This position is also supported by other individual network operators.

20.5 However, for many of the same reasons given in relation to access to lead-in ducts and manholes, several other fixed and mobile operators disagree with the inclusion of other forms of access (e.g. sewer or aerial) as substitutes for inter-exchange and mainline ducts.

MCMC findings on market definition

20.6 Unlike lead-in ducts and manholes, the MCMC considers it more likely that alternative duct networks may be used as effective substitutes for inter-exchange and mainline ducts. The MCMC notes that an operator is likely to regard access to aerial (e.g. power poles) or subterranean (e.g. sewers) facilities as possible options for rolling out a network between exchanges and past houses on the street over longer distances.

20.7 The MCMC also notes that is now common for operators to acquire aerial or sewer access where access to inter-exchange and mainline ducts are unavailable (e.g. in rural areas) or are only available on prohibitive terms.

20.8 The MCMC notes that a similar approach is applied in Singapore where inter-exchange ducting has been deregulated due to the number of different ducting systems available from a range of power and road authorities in Singapore.

20.9 Therefore, the MCMC proposes to maintain its view that there is a national market for the wholesale supply of inter-exchange and mainline ducts, which may include access to aerial or sewer systems where available.

Assessment of dominance

20.10 The MCMC notes that an operator will generally prefer to use inter-exchange and mainline ducts when rolling out a fibre network. These ducts

[223] ACCC, *Fixed Services Review Discussion Paper on the Declaration Inquiry* (2013) at page 81.

are designed to house telecommunications equipment and they are built to provide a direct route to particular network locations.

20.11 However, as discussed above, it may also be possible to access other aerial (e.g. power poles) or subterranean (e.g. sewers) duct facilities where the principal inter-exchange or mainline duct is either unavailable or is offered on prohibitive terms. The MCMC notes that these alternative duct networks tend to form a patchwork of routes that cover the majority of the country, which means they are generally available as substitutes for inter-exchange and mainline ducts, if necessary.

20.12 This is important when assessing dominance in the market for access to inter-exchange or mainline duct because it means that competitive alternatives exist to prevent one network operator from gaining a significant degree of power in the market. For example, while Telekom Malaysia is likely to have a high degree of market power in most other fixed-line markets, the MCMC notes that this is less likely to be the case in the market for inter-exchange and mainline ducts. This is because alternative duct networks are typically available which limit the incumbent's ability to exert anti-competitive pressure on access seekers when negotiating access to Telekom Malaysia's duct network.

20.13 The MCMC notes that a similar approach has also been taken in Singapore where inter-exchange ducting was deregulated due to the number of different ducting systems available from a range of power and road authorities in Singapore.

20.14 Therefore, for the above reasons, the MCMC considers the market for access to inter-exchange and mainline ducts to be relatively competitive at this time.

Preliminary finding on dominance

20.15 The MCMC's preliminary view is that the national market for inter-exchange and mainline ducts is relatively competitive due to the presence of alternative forms of ducting (e.g. aerial, sewer, etc.).

Question 20

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you have any data to support a calculation of market share?
(c) Should the MCMC follow the Singapore approach and find that the market for inter-exchange and mainline ducts is relatively competitive due to the availability of alternative forms of ducting (e.g. power, road, etc.)?
(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

21 Access to towers

Market summary from Market Definition Analysis

21.1 Tower access is principally required for the rollout of wireless technologies, whether by means of mobile, WiMAX or broadcasting transmission.

21.2 Tower access is principally required for wireless network rollout. It is important to consider the two main features relevant to the provision of the wireless services that are typically delivered by mobile network operators:

(a) first is coverage of the service, where the coverage area of a base station determines the extent of service availability; and

(b) second is capacity of the service, where the number of concurrent users served is limited by the capacity of the base station.

21.3 The effect of these two components is that cell sizes tend to be significantly smaller in areas where there is a high density of users. The capacity of the base station limits the number of concurrent users. In regional areas, where the user density is low, cell sizes are larger and the range of the base station limits coverage.

21.4 As a practical matter, mobile network operators design their networks with a wide range of cell sizes. In Kuala Lumpur, there are very small cells serving a junction or a floor of a shopping mall (i.e. picocells) through to small cells (i.e. nanocells) and larger cells which cover a stretch of freeway (i.e. macrocells).

Summary of submissions on market definition

21.5 A representative body for various telecommunications infrastructure providers raises the following points for consideration by the MCMC:

(a) Though all members of the representative body are tower providers, not all members provide masthead and rooftop space. Masthead and rooftop space should be excluded from the market for access to towers.

(b) The identification of a state-based geographic market (i.e. instead of a national market) for access to towers appears to target state-based companies, even though these companies were originally formed at the request of the government to improve coverage at sub-urban and rural areas.

(c) Tower ownership by state-based companies in their respective states remains small when compared to those owned by other operators (e.g. Celcom, DiGi, Maxis, Telekom Malaysia, etc.). Further, this percentage is lower still if a national market is applied without masthead and rooftop space included in the defined market.

21.6 Therefore, based on the above, the representative body believes that the MCMC should apply a national market (and not regional or individual geographic markets) for access to towers.

21.7 A prominent fixed network operator has taken an opposing view. The operator argues that the MCMC should place more emphasis on the geographic dimension when defining infrastructure markets where government owned entities provide a monopoly service or have a significant footprint (e.g. Sacofa in Sarawak).

21.8 Several other operators appear to share this view and support the MCMC's proposed state-based geographic market for access to towers, mastheads and rooftop space.

MCMC findings on market definition

21.9 In the Market Definition Analysis,[224] the MCMC notes that the market for access to towers is subject to unique geographic features given the presence of state-based companies that are provided with regulatory protections in certain states.

21.10 Based on the feedback that has been received to date from the industry, the MCMC notes that most access seekers who require tower access services have complained that insufficient alternatives are available in some states (e.g. Sarawak). For the purposes of market definition the MCMC notes that due to certain geographic features, state-based geographic markets are likely for access to towers (and related network infrastructure).

21.11 Therefore, the MCMC proposes to maintain its preliminary view that there is a state-based geographic market for access to towers, mastheads and rooftop space.

21.12 The MCMC also acknowledges that tower ownership by state-based companies in many states remains small when compared to the number of towers that are owned by other operators. This point is considered below in the MCMC's dominance assessment.

Assessment of dominance

Market structure and the nature of competition

21.13 The MCMC notes that a mobile operator requiring tower access at a particular location will typically have limited options. The operator may attempt to obtain access to a third party tower or build its own tower. In some locations, the mobile operator could also seek to acquire access to a rooftop or other mast-like facility (e.g. an antenna on a bridge or telecommunications tower).

21.14 However, towers are usually the preferred method of rolling out infrastructure, particularly in non-urbanised areas and along highways and

[224] See: discussion on 'Geographic dimension' under section 4 of Part F of Market Definition Analysis.

busy thoroughfares. Therefore, the MCMC notes that access seekers are likely to face many of the same issues that pertain to other network facilities, namely that they are difficult and costly to replicate in a particular area which often leads to each tower site forming a natural monopoly.

State-based tower companies

21.15 In Malaysia, regional differences for tower ownership and operation must also be considered when assessing dominance.

21.16 The ability to either obtain access to towers or to rollout new towers is not uniform across Malaysia. There is a key difference in the way towers are owned and operated in Malaysia in comparison to other network infrastructure, which is that they are often owned by state-controlled entities. This is likely to have implications on the degree of competition that exists in the market for towers.

21.17 In several states, towers are owned and operated predominantly by state-based entities. In some cases state-based ownership within a particular state was found to be as much as 95%.[225]

21.18 The MCMC also understands that some states restrict the building of towers to the state-owned companies. The MCMC acknowledges that there may be environmental reasons for centralising tower access through one particular company. However, the point remains that the field of rivalry is limited by these restrictive regulations, which may have significant impacts on the competitive dynamics in the tower markets on a state-by-state basis.

21.19 Several communication providers have claimed that the state-based ownership model for the provision of tower services in several states has led to higher costs for gaining access to those towers.[226] For example, one operator claimed that Common Tower Technologies Sdn Bhd (**CTT**) required it to use fibre optic owned by Celcom Timur (an affiliate) in order to access CTT towers, which increases costs for access seekers.[227]

21.20 It should be acknowledged that the merits of these complaints are largely unsubstantiated at this point, particularly since one state-based tower operator that responded to the MCMC's questionnaire also claimed to be a price leader in its provision of tower services.[228] However, if true, the ability to exercise price independence in a particular region or state would likely support a finding of dominance for state-based operators in their home markets.

21.21 For these reasons, the MCMC's preliminary view is that Sacofa is likely to be the dominant tower operator in Sarawak's state tower market. Sacofa claims to have a [c-i-c]% share of the tower market in Sarawak. In addition, as discussed above, several communications providers have

[225] Operator Questionnaire Response at 2.1(b).
[226] For example, see: Operator Questionnaire Response at 2.13.
[227] Operator Questionnaire Response at 3.14.
[228] See: Sacofa Questionnaire Response at 2.1(d).

provided examples of state-backed tower companies artificially raising or maintaining their prices, which further supports the MCMC's position due to Sacofa being the sole operator in Sarawak.

21.22 The MCMC notes that KJS may be in a dominant position within the Selangor state tower market. KJS is a joint venture company with the State of Selangor, which maintains a 30% stake in the company.[229] The MCMC notes that KJS's churn rate is "non-existent or minimal" and that access seekers only stop using KJS towers if the "site or structure is no longer suitable as a transmission station."[230] This would seem to suggest that the operator is able to operate with a high degree of price independence. However, unlike Sacofa in Sarawak, it appears that KJS still faces a relatively high degree of competition against other private tower operators (it claims to own 308 of a total 5,000 state towers).[231] Therefore, the MCMC does not consider KJS to be dominant at this time, but would appreciate any further information that may be available on this issue.

21.23 Similarly, the MCMC also notes that CTT may be in a dominant position within the Sabah state tower market. CTT was appointed by the Sabah State Government as the state-backed operator of its 105 towers in February 2005.[232] As discussed above, the MCMC has received complaints from access seekers in relation to CTT's requirement that operators use fibre access owned by affiliates of CTT. However, without further evidence, the MCMC does not consider CTT to be in a position of dominance at present due to the relatively small number of towers it currently operates.

Preliminary finding on dominance

21.24 Based on available evidence, the MCMC's preliminary view is that Sacofa in Sarawak is the only dominant tower operator within its local state tower market.

21.25 The MCMC does not consider KJS in Selangor and CTT in Sabah to be dominant in their respective state tower markets.

21.26 The MCMC welcomes further evidence or submissions to determine whether its current findings are accurate.

Question 21

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?

(b) Do you have any data to support a calculation of market share?

(c) Are you able to provide examples of a particular tower operator acting anti-competitively due to its position as the dominant provider in a particular state

[229] See: http://www.kjs.com.my/AboutKJS/AboutUs.htm.
[230] Operator Questionnaire Response at 1.8(b).
[231] KJS Questionnaire Response at 1.10.
[232] See: http://commontower.com.my/index.php?page=profile&id=70#.

market?
(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

22 Access to co-location and exchange buildings

Market summary from Market Definition Analysis

22.1 Exchange buildings are a function of the PSTN network, where interconnection takes place to establish telephone calls between subscribers.

22.2 Access to co-location space and facilities at exchange buildings will generally be required in two circumstances:

(a) when interconnection with a particular network is required; and

(b) when access to the network elements (e.g. ULL and line sharing services, as discussed further below) of the owner of the exchange building is required.

22.3 The ACCC has identified a number of elements that are typically offered as part of an 'equipment building access service' (which is roughly equivalent to exchange building access and co-location) in Australia:

(a) the provision of access to floor space and equipment racks or rack space;

(b) the provision of access to cable trays and the internal interconnection cables contained in them, so that internal interconnection may be performed to connect access seeker equipment (e.g. DSLAMs) to the network operator's fixed line equipment (e.g. the MDF) within the exchange; and

(c) the inclusion of power, security and air-conditioning.[233]

22.4 Network Co-Location Services are currently included on the Access List.

Summary of submissions on market definition

22.5 One operator argues that the MCMC should consider co-location at other alternative points of presence rather than exchange buildings only. The operator also notes that co-location services are already sufficiently regulated under the Access List and MSAP.

22.6 Another licensee supports a national wholesale market for access to co-location services at exchange buildings. The licensee submits that co-location is typically used in conjunction with access to network elements (e.g. full unbundling), transmission, etc. so a national wholesale market for

[233] ACCC, *Fixed Services Review Discussion Paper on the Declaration Inquiry* (2013) at page 81.

access to co-location services at exchange buildings would be consistent with the market definitions of these other related services.

MCMC findings on market definition

22.7 The MCMC has re-considered the geographic dimension of the market for access to co-location and exchange buildings. The MCMC's preliminary view was that strategic decisions in relation to co-location facilities and exchange buildings were typically made by an operator with regard to the operator's broader national network and rollout strategy. However, the MCMC now considers that the geographic dimension of the market for access to co-location and exchange buildings is more likely to centre on the particular location of each co-location or exchange facility.

22.8 The MCMC accepts that co-location is often used in conjunction with other access services, but these facilities are typically location-specific with few alternatives available for obtaining access to a particular co-location facility or exchange building.

22.9 Therefore, the MCMC now considers there to be a market for the wholesale supply of co-location services at each exchange building.

Assessment of dominance

22.10 As discussed in the Market Definition Analysis,[234] the MCMC considers that there is typically no alternative to obtaining access to the co-location facilities provided by the access provider.

22.11 For interconnection purposes, access at that exchange building is required in some form. There are other forms of interconnection that may be possible (e.g. in-span interconnection). However, the MCMC notes that economically, the most efficient form of interconnection will usually involve the provision of access to exchanges, including co-location facilities.

22.12 For access to network elements, due to the distance limitations associated with xDSL services, the MCMC notes that access to a particular node or exchange building is essential to connect directly with the copper network so as to be able to provide those xDSL services.

22.13 For these reasons, the MCMC considers access to exchanges as a form of natural monopoly. This would effectively mean that the owner of an exchange building will be viewed as dominant in relation to the market for the wholesale supply of co-location services to that exchange building.

22.14 However, the MCMC also notes that the Network Location Co-Location Service is included in the current Access List. The MCMC welcomes comments on the effectiveness of the current access regulation in curtailing the effects of dominance in relation to access to co-location and exchange buildings.

[234] See discussion on 'Product Dimension' under section 5 of Part F of the Market Definition Analysis.

Preliminary finding on dominance

22.15 The MCMC is of the preliminary that the owner of each co-location facility or exchange building should be considered dominant. The MCMC notes that the MCMC can only determine licensees to be dominant. Accordingly, only those owners of co-location facilities or exchange buildings that are licensees will be the subject of a dominance classification.

22.16 The MCMC welcomes comments on the effectiveness of the current Access List in curtailing the effects of dominance in relation to access to co-location and exchange buildings.

Question 22

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Has access regulation been effective in curtailing the effect of dominance in the market?
(c) Do you agree or disagree with the MCMC's preliminary finding on dominance?

23 Access to submarine cable landing stations and earth stations

Market summary from Market Definition Analysis

23.1 Earth stations are buildings which transmit radio frequency signals to, or receive such signals from, a geostationary space station in specified frequency bands.[235]

23.2 In a report written for the ACCC in Australia, a landing station was defined as:

> *"A form of telecommunications building located in the vicinity of the shoreline for the purpose of housing specialist undersea cable telecommunications transmission equipment. In this instance the Landing Station is defined to include beach access facilities that protect the undersea optical fibre cable as it comes ashore."*[236]

23.3 In relation to submarine cable landing, the landing will either be direct (in the case of a point-to-point cable system) or via a branch from a main cable using a submarine branching unit. In either case, the location of the

[235] ITU, *Determination of the coordinate area of an earth station operating within a geostationary space station and using the same frequency band as a system in a terrestrial service* (Recommendation ITU-R IS.847-1).
[236] Gibson Quai – AAS Consulting, *ACCC Transmission network cost model description of operation* (2007) at ix.

landing station will be fixed to the point of connection with the main or branch cable system.

Summary of submissions on market definition

23.4 Several operators suggest that the MCMC should consider other alternative points of presence. One such operator also proposed that the MCMC conduct a detailed study on the impact on the industry in general of including other geographic alternatives.

23.5 However, other operators have taken an opposing view and agree with the MCMC's proposal to exclude alternative points of presence (e.g. urban points of presence). One operator notes that urban points of presence should not be viewed as substitutes as it would involve bundling of transmission from the cable landing station back to the urban centre.

23.6 Further, the operator also notes that larger operators with some existing transmission can connect at the cable landing station or earth station given that the submarine cable and satellite contracts are long term and they have a point of presence nearby.

MCMC findings on market definition

23.7 The MCMC notes that some licensees view other alternative points of presence as being possible substitutes for access to submarine cable landing stations and earth stations. However, the MCMC considers the arguments against including other geographic alternatives in the definition for access to cable landing stations and earth stations to be more persuasive.

23.8 In addition to the reasons that were originally provided in the Market Definition Analysis,[237] the MCMC notes that other urban points of presence are unlikely to be viable substitutes as they require bundling of other transmission from the cable landing station or earth station back to the urban point of presence in order to be effective. This may make this alternative form of access less economically viable than access directly to the cable landing station or earth station.

23.9 Therefore, the MCMC considers that the wholesale supply of access to each and every submarine cable landing station and satellite earth station is a natural monopoly and each represent individual markets.

Assessment of dominance

23.10 For the reasons stated in the Market Definition Analysis,[238] the MCMC notes that access to submarine cable landing stations and earth stations tend to exhibit natural monopoly characteristics. This is largely due to remoteness and the unavailability of alternative forms of access to submarine cable landing stations and earth stations.

[237] See: section 6 of Part F of Market Definition Analysis.
[238] See discussion on 'Product dimension' under section 6 of Part F of Market Definition Analysis.

23.11 Therefore, the MCMC is of the preliminary that the owner of a submarine cable landing station or earth station may be considered dominant.

Barriers to entry

23.12 The MCMC notes that barriers to entry are likely to be high for a number of reasons:

(a) the cost of a new entrant installing a rival or substitute station is impractical and infeasible;

(b) in the case of access to a submarine cable landing station, building a new station is usually not permitted by the consortium agreement which governs the landing of the cable (i.e. the consortium will have appointed a specific landing party); and

(c) access to a particular submarine cable or satellite is usually most efficiently obtained at the current location of that landing station or earth station.

Preliminary finding on dominance

23.13 The MCMC is of the preliminary that the owner of each submarine cable landing station or earth station should be considered dominant. The MCMC assumes that owners of these stations are licensees.

Question 23

The MCMC is seeking views on the following:
(a) Do you have any further comments on market definition?
(b) Do you agree or disagree with the MCMC's preliminary finding on dominance?

24 Access to full access (unbundling of local loop), sub-loop, line sharing and bitstream services

Market summary from Market Definition Analysis

24.1 ULL, sub-loops and line sharing generally refers to the network of lines that run from an end user's premises to the local exchange.[239] The local loop may be in the form of copper pairs or optical fibre.

24.2 In Malaysia, the Line Sharing Service, the Bitstream Service, the Full Access Service and the Sub-loop Service are on the MCMC's Access List.

24.3 In Australia, an unconditioned local loop service (which is equivalent to ULL) provides full access to cables (e.g. twisted copper pairs) between:

[239] EC, 'Directive 2002/12/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities, *Official Journal of the European Communities* (7 March 2002) at Annex II.

(a) the boundary of a communications grid (e.g. the PSTN) at or near the end user property; and

(b) a potential point of interconnection that is related to a "customer access module" or any other device that provides a dial-tone and dial current to end user equipment. The ACCC defines a 'customer access module' as a "device that provides ring tone, ring current and battery feed to customers' equipment."[240]

24.4 In Europe, unbundled access to the local loop is regulated under Regulation No 2887/2000.

Summary of submissions on market definition

24.5 One operator notes that, according to the network diagram, DSL wholesale should not be considered a substitute for local access services. DSL wholesale is an end-to-end service, while local access services are the end portion of the network only.

MCMC findings on market definition

24.6 The MCMC notes that licensees do not appear to consider access to resale services, such as wholesale DSL, as an effective substitute for access to local access services. Instead, access to resale services are typically provided as an end-to-end service, while local access services are offered at the end portion of the network only.

24.7 Therefore, the MCMC continues to view there to be a single national market for the wholesale provision of local access services that includes ULL, bitstream services, sub-loop services and line sharing services.

Assessment of dominance

24.8 As discussed in the Market Definition Analysis,[241] the MCMC considers the following local access services to be substitutes for accessing the 'last mile':

(a) ULL;

(b) sub-loop services;

(c) line sharing services; and

(d) bitstream services.

24.9 The MCMC does not consider that wholesale resale of DSL services or the resale of local telephony services are substitutable for access to these local access services. Resale of these services does not provide access seekers with the functionality and control that is required to effectively compete with the owner of local access infrastructure.

[240] ACCC, *Fixed Services Review Discussion Paper on the Declaration Inquiry* (2013) at page 55-56.
[241] See discussion on 'Product dimension' under section 7 of part F of Market Definition Analysis.

24.10 Similarly, the MCMC does not consider duct access (e.g. via lead-in ducts) to be a viable alternative for access to this local access infrastructure. Access to ducts would require an access seeker to self-provide the copper or fibre infrastructure in the 'last mile', which is unlikely given the very high barriers to entry in the 'last mile'.

24.11 Thus, due to the lack of alternatives to local access services, the MCMC notes that a network operator will be in an advantageous position where other 'last mile' infrastructure is limited or unavailable.

24.12 The MCMC considers that Telekom Malaysia is likely to have significant market power in the local access market due to the size and reach of its fixed network. As discussed in relation to other fixed service markets, Telekom Malaysia's network covers most of the country and competitors are often forced to rely on access to the incumbent's network in order to reach end users in remote or regional areas.

24.13 Therefore, due to the size of the Telekom Malaysia fixed network and the lack of viable options for achieving access in the 'last mile', the MCMC considers Telekom Malaysia to be dominant in the national market for access to local access services.

24.14 However, the MCMC also notes that the Line Sharing Service, the Bitstream Service, the Full Access Service and the Sub-loop Service are currently on the Access List. The MCMC welcomes comments on the effectiveness of the current Access List in curtailing the effects of dominance in relation to local access services.

Preliminary finding on dominance

24.15 The MCMC's preliminary view is that Telekom Malaysia is dominant in the national market for access to local access services (including ULL, bitstream services, sub-loop services and line sharing services).

24.16 The MCMC welcomes comments on the effectiveness of the current access regulation in curtailing the effects of dominance in relation to the local access services.

Question 24

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you have any data to support a calculation of market share?
(c) Has access regulation been effective in curtailing the effect of dominance in the market?
(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

25 Access to dark fibre

Market summary from Market Definition Analysis

25.1 Dark fibre is fibre optic cabling that is not being used to transmit information and constitutes a passive network element. Fibre optic cables transmit data via a series of light pulses and therefore an unused cable is referred to as 'dark' or 'unlit'.[242]

25.2 Operators will typically purchase dark fibre capacity at a wholesale level and then install their own equipment to 'light' the fibre and utilise the fibre to design and provide communications services.

Summary of submissions on market definition

25.3 A representative body for various telecommunications infrastructure providers supports the MCMC's decision not to include copper or wireless technologies in the market for access to dark fibre. This position was supported by several other licensees as legacy technologies were generally viewed as inferior to dark fibre in terms of capacity, stability, reliability, compatibility, etc.

25.4 On the other hand, a prominent fixed network operator considers there to be a number of substitute transmission technologies for dark fibre, including copper networks, radio links, power line networks and broadband wireless access.

25.5 Further, another licensee notes that other copper or wireless technologies may be viable substitutes in remote areas where the cost of installation of dark fibre is high.

MCMC findings on market definition

25.6 The MCMC notes that one licensee views other transmission technologies (e.g. copper, wireless, etc.) as possible substitutes for dark fibre. However, the MCMC ultimately considers that these technologies are either becoming dated (e.g. legacy copper) or do not offer comparable transmission capabilities (e.g. capacity, stability, reliability, etc.) to warrant consideration as a viable alternative to dark fibre.

25.7 The MCMC notes that this position appears to be supported by the majority of those licensees who provided comments on this issue. The MCMC also notes that this is the position that is applied by the Swedish Post and Telecom Authority (**PTS**) in Sweden.

25.8 Further, the MCMC does not consider access to transmission services or other passive infrastructure as viable substitutes for access to dark fibre services at this time. The MCMC notes that inter-exchange and tail transmission services are not likely to be considered viable alternatives for access to dark fibre due to the significantly higher prices for transmission

[242] PTS, *Dark Fibre – market and state of competition* (June 2008) at pages 42-43.

services. The pricing of transmission services usually only approaches the price of dark fibre services when the acquiring party has a serious build-buy choice and the network infrastructure owner reduces the price of transmission to avoid the acquiring party from building its own infrastructure. This is generally not likely to be the case.

25.9 For these reasons, the MCMC maintains its preliminary view that there is a national market for the provision of wholesale access to dark fibre services.

Assessment of dominance

25.10 As discussed above, the MCMC does not consider there to be any viable alternatives to acquiring access to dark fibre. Other legacy technologies do not have the requisite transmission capabilities to satisfy an access seeker that wants to gain access to dark fibre.

25.11 Therefore, due to the lack of satisfactory alternatives, the MCMC notes that the operator of a fibre network is likely to have significant market power in instances where access to rival fibre networks is either limited or unavailable.

25.12 As discussed in previous sections, Telekom Malaysia has the largest and most extensive fibre network in Malaysia. While other operators may be able to compete in more densely populated urban areas where they have a network presence, the MCMC received several submissions from licensees that claimed Telekom Malaysia was often in a position of dominance in rural and regional areas where smaller fixed service providers are required to rely on the incumbent's network.

25.13 Therefore, due to the size of Telekom Malaysia's fibre network and the lack of viable alternatives to dark fibre, the MCMC considers Telekom Malaysia to be dominant in the national market for access to dark fibre.

25.14 Furthermore, due to the substantial cost of building a duplicate network, the MCMC also notes that barriers to entry or expansion in the national dark fibre market are likely to be high.

Preliminary finding on dominance

25.15 The MCMC's preliminary view is that Telekom Malaysia is dominant in the national market for access to dark fibre.

Question 25

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you have any data to support a calculation of market share?
(c) Do you agree or disagree with the MCMC's preliminary finding on dominance?

26 Access to main distribution frames and associated in-building wiring

Market summary from Market Definition Analysis

26.1 An MDF is the frame on which incoming main cables and local distribution cables within an end user building or premises are terminated and cross-connected.[243] In-building wiring refers to the internal wiring that is installed within an end user premises.

Summary of submissions on market definition

26.2 A fixed network operator does not agree that access to MDFs and in-building wiring should be a separate communication market. MDFs and in-building wiring belongs to the building owner (who is not likely to be a licensee) and usually there is only one MDF per building. This position is also supported by several other licensees.

26.3 A licensee also notes that there do not appear to be any viable substitutes to the 'last mile' access provided by MDFs and in-building wiring at this time.

26.4 However, one licensee notes that it may be possible for the supply-side substitute to be an alternative party in circumstances where the data centre for the installation of in-building systems is vast and immense and requires more than one contractor/supplier to install the system.

MCMC findings on market definition

26.5 In response to licensee feedback, the MCMC has revised the geographic dimension of the market for access to MDFs and in-building wiring services. The MCMC notes that most licensees agree that there are unlikely to be any viable substitutes to the 'last mile' access that is provided by MDFs and in-building wiring services. Furthermore, there is typically only one MDF and in-building wiring service per building which limits viable substitutes once facilities have been installed at a particular building.

26.6 In the situation where a data centre is large enough to allow for multiple suppliers to install MDFs and in-building services, the MCMC notes that these remain 'last mile' services that will be difficult to replace (e.g. in response to a SSNIP) once the systems are installed. Therefore, this scenario does not appear to be a significant supply-side substitute for the purposes of market definition.

26.7 For these reasons, the MCMC now considers that access to MDFs and in-building wiring services in each building constitutes a separate and distinct market.

[243] Section 1.2, *IDA Code of practice for info-communication facilities in-building 2012.*

Assessment of dominance

26.8 Access to MDFs and in-building wiring services are located in the 'last mile' and, as such, are generally viewed as a natural monopoly. The MCMC notes that, while other forms of building access may be possible (e.g. by microwave or other wireless service), these are typically not viewed as viable alternatives to the fixed services that provide connection at a particular location.

26.9 This means that each building owner is likely to have significant market power in relation to the market for access to MDF and in-building wiring facilities that service the owner's building. If a provider wishes to service a particular end user location, the building owner (or building manager) ultimately controls access to the MDFs and in-building wiring facilities within the building and alternative forms of access will typically not be available.

26.10 Further, the MCMC also notes that once MDF and in-building wiring services are installed in a building, in most cases it will not make sense for a competitor to install duplicate facilities.

26.11 Therefore, the MCMC's preliminary view is that each building owner is dominant in the market for access to MDFs and in-building wiring facilities at each location where connection to the end user occurs.

Preliminary finding on dominance

26.12 The MCMC's preliminary view is that each building owner is dominant in the market for access to MDFs and in-building wiring facilities at each location where connection to the end user occurs. As discussed above, the MCMC can only designate licensees as dominant. Accordingly, only those building owners that are licensees will be the subject of a dominance classification.

Question 26

The MCMC is seeking views on the following:
(a) Do you have any further comments on market definition?
(b) Do you agree or disagree with the MCMC's preliminary finding on dominance?

27 Access to common in-building mobile systems

Market summary from Market Definition Analysis

27.1 The continued growth of indoor mobile data consumption is forcing mobile operators to find solutions to improve indoor mobile coverage and the reliability of in-building mobile services.

27.2 Ofcom recently identified two basic approaches to improve in-building mobile coverage:

(a) "outside-in" solutions, where the user receives a mobile signal from a network outside of the building, which typically entails some form of upgrade or enhancement to the existing outdoor cellular network; and

(b) "inside-in" solutions, where dedicated in-building solutions are provided so that the user receives a mobile signal from an access point within the building which is dedicated to serving that particular building.[244]

27.3 This section is focused on the latter solution (i.e. "inside-in" solutions) as these typically involve some form of sharing between mobile operators of common in-building systems and other cellular infrastructure.

Summary of submissions on market definition

27.4 Several service providers note that external mobile solutions could be an acceptable substitute for improving indoor mobile coverage. However, external solutions may not match the performance of an in-building mobile solution. Further, once an in-building solution is established, there is little possibility for a rival in-building solution to be built unless the existing in-building system has limited technological capabilities (e.g. an older system may not be able to accommodate LTE).

27.5 A prominent mobile operator also notes that sub-1GHz spectrum, which is meant to be able to penetrate beyond the 'first wall', is only held by two mobile operators. This effectively gives those operators a strategic advantage over the rest of the other mobile operators.

MCMC findings on market definition

27.6 The MCMC notes that most licensees do not appear to view external mobile solutions as a viable substitute for in-building mobile systems.

27.7 While it is theoretically possible to use an external mobile solution to improve indoor mobile coverage (e.g. build a new mobile cell or enhance an existing cell), the MCMC considers that in most instances this will not be a practical solution as internal solutions provide better mobile coverage and are more cost effective to implement.

27.8 Further, the MCMC also agrees with the argument that once an in-building mobile system is established, it becomes difficult for a competitor to build a rival internal system.

27.9 Therefore, for the above reasons, the MCMC proposes to update the geographic dimension of the market for access to common in-building mobile systems. Most licensees agree that there are unlikely to be any

[244] Ofcom, *Options for improving in-building mobile coverage – final report* (18 April 2013) at 35-36.

viable substitutes to these systems and, once an in-building mobile system is installed in a particular building, it is unlikely that a competitor would build a rival in-building solution for that same building.

27.10 The MCMC now considers that access to common in-building mobile systems in each building constitutes a separate and distinct market.

Assessment of dominance

27.11 As discussed above, the MCMC notes that the preferred approach for improving indoor mobile coverage is typically by means of an internal (i.e. "inside-in") solution. Furthermore, competitive alternatives will often be limited for access to common in-building mobile systems. For example, space may not be available in the building to construct new facilities and, in most cases, it may not make sense to duplicate the existing facilities.

27.12 This means that a building owner is likely to have significant market power in relation to the market for access to in-building mobile systems for each building that he or she owns. If a provider wishes to service a particular building, the building owner controls access to the in-building mobile facilities that are installed within the building and alternative forms of access are typically not available.

27.13 Further, the MCMC also notes that once an in-building mobile solution is installed in a building, in most cases it will not make sense for a competitor to install a duplicate solution.

27.14 Therefore, the MCMC's preliminary view is that each building owner is dominant in the market for access to in-building mobile systems at each building that he or she owns.

Preliminary finding on dominance

27.15 The MCMC's preliminary view is that the provider of access to in-building mobile systems is likely to be dominant at each location. As discussed above, the MCMC can only designate licensees as dominant. Accordingly, only those building owners that are licensees will be the subject of a dominance classification.

Question 27

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?

(b) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Annexure 1 Summary of questions

Part A:

Question A1

The MCMC is seeking views on the following:

(a) Do you have any further comments on the Dominance Guideline?

Question A2

The MCMC is seeking views on the following:

(a) Do you have any further comments on the SLC Guideline?

Part B:

Question 1

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you agree with the preliminary market share findings?
(c) Have the Rate Rules been effective in promoting competition at the retail level for fixed telephony services?
(d) Are there any additional competition issues that the MCMC should consider before making its final determination on dominance?
(e) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 2

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you agree with the preliminary market share findings?
(c) Are there any additional competition issues that the MCMC should consider before making its final determination on dominance?
(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 3

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you agree with the preliminary market share findings?

(c) Are there any additional competition issues that the MCMC should consider before making its final determination on dominance?
(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 4

The MCMC is seeking views on the following:
(a) Do you have any further comments on market definition?
(b) Do you agree with the preliminary market share findings?
(c) Are there any additional competition issues that the MCMC should consider before making its final determination on dominance?
(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 5

The MCMC is seeking views on the following:
(a) Do you have any further comments on market definition?
(b) Do you have any data to support a calculation of market share?
(c) Are there any additional competition issues that the MCMC should consider before making its final determination on dominance?
(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 6

The MCMC is seeking views on the following:
(a) Do you have any further comments on market definition?
(b) Do you have any data to support a calculation of market share?
(c) Do you believe that the access regulation has been effective in preventing anti-competitive conduct from occurring in the inter-exchange transmission market?
(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?
(e) Should the MCMC make a non-dominance finding if high market share is the result of lack of investment by rivals, depending on the barriers to entry in this market?

Question 7

The MCMC is seeking views on the following:
(a) Do you have any further comments on market definition?
(b) Do you agree with the preliminary market share findings?
(c) Do you have any examples of a wholesale tail transmission provider leveraging its position in other markets (e.g. local access services, inter-exchange transmission, etc.) to negatively affect competition in the tail transmission market?

(d) Do you believe that the access regulation has been effective in preventing anti-competitive conduct from occurring in the inter-exchange transmission market?
(e) Do you agree or disagree with the MCMC's preliminary finding on dominance?
(f) Should the MCMC make a non-dominance finding if the market share is the result of lack of investment by rivals, depending on the barriers to entry in this market?

Question 8

The MCMC is seeking views on the following:
(a) Do you have any further comments on market definition?
(b) Do you have any data to support a calculation of market share?
(c) Do you have any examples of a provider leveraging its position in the tail transmission market to negatively affect competition in the domestic managed data services market?
(d) Based on the number of new entrants in the domestic managed data services market, do you believe this has had a significant impact on competition in the market?
(e) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 9

The MCMC is seeking views on the following:
(a) Do you have any further comments on market definition?
(b) Do you have any data to support a calculation of market share?
(c) Should the MCMC consider countervailing buyer power as a possible competitive constraint on a dominant provider of international connectivity services?
(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 10

The MCMC is seeking views on the following:
(a) Do you have any further comments on market definition?
(b) Do you have any data to support a calculation of market share?
(c) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 11

The MCMC is seeking views on the following:
(a) Do you have any further comments on market definition?
(b) Do you have any data to support a calculation of market share?
(c) Are there further examples of Telekom Malaysia attempting to use its position as the sole provider of broadcasting transmission services to improve its own

position?

(d) Should the MCMC define separate markets for VSAT and/or Freesat NJOI satellite services?

(e) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 12

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?

(b) Do you have any data to support a calculation of market share?

(c) Do you believe that bundling (e.g. with mobile and fixed telephony services) is likely to have an impact on competition in the online and/or voice directory services markets moving forward?

(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 13

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?

(b) Do you agree with the preliminary findings on market share?

(c) Is there any evidence of a particular FTA provider acting in a dominant manner in the FTA broadcasting services market?

(d) Do you believe the growth of IPTV services is likely to have a substantive effect on the level of competition in the subscription broadcasting services market in the future?

(e) Are you able to provide further data (e.g. viewership numbers) to support the calculation of market share for the broadcasting services markets?

(f) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 14

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?

(b) Do you agree with the preliminary finding on market share?

(c) How do you think the transition to digital broadcasting is likely to impact competition in the content acquisition market?

(d) Do you agree with the MCMC's preliminary view that the market for the acquisition of ordinary content is relatively competitive at the moment?

(e) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 15

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?

(b) Are existing regulatory instruments able to constrain the ability of interconnection service providers from abusing their position of dominance in the markets for call and SMS termination?

(c) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 16

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?

(b) Do you have any data to support a calculation of market share?

(c) Are existing regulatory instruments able to constrain the ability of interconnection service providers from abusing their position of dominance in the market for call origination?

(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 17

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?

(b) Do you agree with the MCMC's decision to update the geographic dimension of the market for inter-link services?

(c) Has access regulation been effective in mitigating anti-competitive outcomes in the market?

(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 18

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?

(b) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 19

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?

(b) Do you have any data to support a calculation of market share?

(c) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 20

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you have any data to support a calculation of market share?
(c) Should the MCMC follow the Singapore approach and find that the market for inter-exchange and mainline ducts is relatively competitive due to the availability of alternative forms of ducting (e.g. power, road, etc.)?
(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 21

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you have any data to support a calculation of market share?
(c) Are you able to provide examples of a particular tower operator acting anti-competitively due to its position as the dominant provider in a particular state market?
(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 22

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Has access regulation been effective in curtailing the effect of dominance in the market?
(c) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 23

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 24

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?
(b) Do you have any data to support a calculation of market share?
(c) Has access regulation been effective in curtailing the effect of dominance in the market?
(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 25

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?

(b) Do you have any data to support a calculation of market share?

(c) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 26

The MCMC is seeking views on the following:

(a) Do you have any further comments on market definition?

(b) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Question 27

The MCMC is seeking views on the following:

(c) Do you have any further comments on market definition?

(d) Do you agree or disagree with the MCMC's preliminary finding on dominance?

Annexure 2 Summary of preliminary findings on dominance

No	Communications market	Geographic scope	Dominant position
Retail			
1.	Fixed telephony (including VoIP) ▪ Access line and local calls (Business) ▪ Access line and local calls (Residential) ▪ National calls (separate Bus/Res) ▪ International calls (separate Bus/Res) ▪ Fixed-to-mobile calls (separate Bus/Res)	National market	Telekom Malaysia (all markets)
2.	Fixed broadband and data ▪ High speed and quality (Business) ▪ Low speed and quality (Residential)	National market	Telekom Malaysia (all markets)
3.	Mobile telephony	National market	No dominance finding
4.	Mobile broadband and data (including WiMAX)	National market	No dominance finding
5.	Mobile messaging services (including SMS and OTT messaging)	National market	No dominance finding
6.	Transmission (tails) or local leased lines	National market	Telekom Malaysia
7.	Transmission (international) or IPLCs	National market	Telekom Malaysia (all markets)
8.	Domestic managed data services	National market	Telekom Malaysia
9.	International managed data services	National market	Telekom Malaysia
10.	Directory services ▪ Voice or call centre services ▪ Online directories ▪ Published directories	National market	No dominance finding
11.	Broadcasting services ▪ Free-to-air ▪ Subscription television	National market	TV 3, ntv7, 8TV and Channel 9 collectively dominant – FTA broadcasting Astro – subscription

No	Communications market	Geographic scope	Dominant position
			television broadcasting
Wholesale			
12.	Fixed telephony (including VoIP) ▪ Access Line (Business) ▪ Access Line (Residential) ▪ Local calls (Bus/Res) ▪ National calls (Bus/Res) ▪ International calls (Bus/Res) ▪ Fixed-to-mobile calls (Bus/Res)	National market	Telekom Malaysia (all markets)
13.	Fixed broadband and data (Bus/Res)	National market	Telekom Malaysia (all markets)
14.	Mobile telephony	National market	No dominance finding
15.	Mobile broadband and data (including WiMAX)	National market	No dominance finding
16.	Transmission (inter-exchange)	National market, excluding the route from Peninsular Malaysia to East Malaysia Route from Peninsular Malaysia to East Malaysia	Telekom Malaysia, Fiberail, Fibercomm collectively dominant Telekom Malaysia
17.	Transmission (tails) or local leased lines	National market	Telekom Malaysia
18.	Transmission (international) or IPLCs	National market	Telekom Malaysia (all markets)
19.	Transmission to submarine cable landing stations and earth stations	Boundaries of each individual point of presence	Operator of each individual point of presence
20.	Broadcasting transmission: ▪ to broadcast towers ▪ for digital transmission	National market	Telekom Malaysia – to broadcast towers PSSB – for digital transmission
21.	Content acquisition: ▪ Premium content ▪ Other ordinary content	National market	Astro – premium content No dominance finding – ordinary content
22.	Termination (fixed and mobile) calls and messages	Each terminating network	Each network operator (fixed and mobile)
23.	Origination (fixed and mobile) calls	Each originating network	Each network operator (fixed and mobile)
24.	Inter-connect links	Each individual link	Operator of each individual link
25.	Wholesale Internet interconnection	National market	No dominance finding

No	Communications market	Geographic scope	Dominant position
26.	Access to facilities and upstream network elements ▪ Access to lead-in ducts and manholes ▪ Access to inter-exchange and mainline ducts ▪ Access to towers ▪ Access to exchange buildings and co-location ▪ Access to submarine cable landing stations and earth stations ▪ Access to local access services, including local loop unbundling, sub-loops, line sharing and bitstream services ▪ Access to dark fibre ▪ Access to main distribution frames and associated in-building wiring (and other in-building facilities) ▪ Access to common in-building mobile systems	Individual markets for access to each facility and network element, except: ▪ state based market for access to towers; ▪ national market for lead-in ducts and manholes; ▪ national market for access to inter-exchange and mainline ducts; ▪ national market for access to local access services; and ▪ national market for access to dark fibre.	Each network operator or building owner which is a licensee for access to: ▪ exchange buildings and co-location; ▪ submarine cable landing stations and earth stations; ▪ MDFs and in-building wiring; and ▪ common in-building mobile systems. Telekom Malaysia as dominant operator for access to: ▪ lead-in ducts and manholes; ▪ local access services; and ▪ dark fibre Sacofa for access to towers in Sarawak. No dominance finding in other states. No dominance finding for access to inter-exchange and mainline ducts.