

Wholesale Broadcasting Transmission Services

Identification and Analysis of Markets, Determination of Market Power and Setting of Remedies.

Final Decision

24th November 2008



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Executive Summary

In accordance with Article 9 of the Electronic Communications (Regulation) Act, the Malta Communications Authority (MCA) is obliged, amongst other things, to carry out reviews of competition in communications markets to ensure that regulation remains appropriate in the light of changing market conditions.

This review sets out the MCA' analysis for the identification of a wholesale broadcasting transmission services market and an assessment of market power. In line with its obligations at law, the MCA carried out a national consultation from the 29th August 2008 till the 30th September 2008. The MCA did not receive any responses to the consultation document and is hereby publishing its final decision for wholesale broadcasting transmission services. The MCA also notified the draft decision to the EU Commission on the 17th October 2008, to which the EU Commission fully agreed with the findings of this decision.

Background on previous notification

In December 2006 the MCA notified a proposed decision on the 'Wholesale broadcasting transmission services' market in Malta with the main conclusion being that the cable and digital terrestrial incumbents held single dominance in their respective market. During the Phase 1 of the notification the EU Commission had issued a serious doubts letter stating that the MCA failed to provide sufficient evidence to prove its market definition.

Before the opening of a Phase 2 investigation, the MCA held meetings with the EU Commission and provided additional evidence to support its findings. Following these discussions the MCA concluded that it would be in the interest of all parties was it to withdraw the notification to enable it to try to address these concerns.

This review presents a fresh analysis of the broadcasting markets in Malta whilst it also attempts to address the issues raised by the EU Commission in the previous notification.

Summary of proposals

A. Identification of Markets

The group of products and services under consideration in this document consist of wholesale broadcasting transmission services. Wholesale services are those sold by electronic communications providers to other service providers rather than to end-users.

In relation to these services, the MCA has identified two relevant wholesale broadcasting markets in Malta, which are the:

- 1. Wholesale television and radio broadcasting transmission services over digital terrestrial, digital cable and analogue cable networks; and
- 2. Wholesale radio broadcasting transmission services over D-TAB networks.

B. Three Criteria Test

As the revised European Commission's Recommendation on relevant product and services markets published in December 2007 excludes the market for wholesale broadcasting services market, the MCA carried out the three criteria test for each market prior to establish it as susceptible to ex ante regulation. This exercise was carried out in accordance with the principles adopted in the Recommendation on relevant product and



service markets.

During this analysis the MCA took into consideration, where applicable, both retail and wholesale elements so as to determine whether the markets met the three criteria.

From the evidence collected none of the two markets met cumulatively the three criteria. Consequently, in line with the principles of the framework, the MCA concludes that none of the identified wholesale broadcasting markets will be susceptible for ex ante regulation.

C. Regulatory Obligations

Given that none of the markets has passed the three criteria test the MCA cannot impose and/or maintain any regulatory obligations on operators.

Consequently, the MCA is withdrawing all existing regulation on Melita Cable Ltd.¹, as mandated under the decision of 2003.

¹ Melita plc. has been formerly known as Melita Cable plc.



Chapter 1 Introduction

The EU regulatory framework for electronic communications networks and services entered into force on the 14th September 2004. The framework is designed to create harmonised regulation across Europe and is aimed at reducing entry barriers and fostering prospects for effective competition to the benefit of consumers. The basis for the new regulatory framework is five new EU Communications Directives:

- Directive 2002/21/EC on a common regulatory framework for electronic communications networks and services ("the Framework Directive");
- Directive 2002/19/EC on access to, and interconnection of, electronic communications networks and associated facilities ("the Access Directive");
- Directive 2002/20/EC on the authorisation of electronic communications networks and services ("the Authorisation Directive");
- Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services ("the Universal Service Directive"); and
- Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector ("the Privacy Directive").

The Framework Directive provides the overall structure for the new regulatory regime and sets out fundamental rules and objectives, which read across all the new directives. Article 8 of the Framework Directive sets out three key policy objectives, which have been taken into account in the preparation of this consultation document, namely promotion of competition, development of the internal market and the promotion of the interests of citizens of the European Union.

The Maltese legislation transposing these Directives came into effect on the 14th September 2004. The relevant pieces of legislation are the Electronic Communications (Regulation) Act, 2004 (hereinafter referred to as ECRA) and the Electronic Communications Networks and Services (General) Regulations, 2004 (hereinafter referred to 'ECNSR').

The Directives require National Regulatory Authorities (NRAs) such as the MCA to carry out reviews of competition in communications markets to ensure that regulation remains appropriate in the light of changing market conditions.

Each market review is divided into three main parts:

- definition of the relevant market or markets;
- assessment of competition in each market, in particular whether any companies have Significant Market Power (SMP) in a given market; and
- assessment of the appropriate regulatory obligations which should be imposed, given the findings on SMP (NRAs are obliged to impose some form of regulation where there is SMP).

More detailed requirements and guidance concerning the conduct of market reviews are provided in the Directives, the ECRA, the ECNSR and in additional documents issued by the European Commission and the MCA. As required by the new regime, in conducting this review, the MCA has taken the utmost account of the two European Commission documents discussed below.

01.1 Market review methodology

In 2003 the EU Commission published its first Recommendation on relevant markets,



which identifies a set of eighteen markets in which ex ante regulation may be warranted. The Recommendation seeks to promote harmonisation across the European Community by ensuring that the same product and service markets are subject to a market analysis in all Member States. However, NRAs are able to regulate markets that differ from those identified in the Recommendation where this is justified by national circumstances. Accordingly, NRAs are to define relevant markets appropriate to national circumstances, provided that the utmost account is taken of the product markets listed in the Recommendation 6 of the ECNSR).

In December 2007 the EU Commission adopted its revised Recommendation on relevant markets. The revised Recommendation presents a shorter list of markets which NRAs are required to analyse for the purpose of ex ante regulation.

The European Commission has also issued guidelines on market analysis and the assessment of SMP ("SMP Guidelines"). Meanwhile the MCA has published a document that provides guidelines on the methodology to be used for assessing effective competition in the Maltese electronic communications sector². The MCA is required to take these guidelines into utmost account when analysing a product or service market in order to assess whether the market under investigation is effectively competitive or otherwise (refer to Regulation 8 of the ECNSR).

As required by Regulation 6 of the ECNSR, the results of these market reviews and the proposed draft measures are notified to the European Commission and to other NRAs. The Commission and other NRAs may make comments within the one month consultation period. If the Commission is of the opinion that the market definition, or proposals to designate an operator with SMP, or proposals to designate no operator with SMP, would create a barrier to the single market, or if the Commission has serious doubts as to its compatibility with Community law and issues a notice under Article 7(4) of the Framework Directive, the MCA is required by Regulation 6 of the ECNSR to delay adoption of regulatory measures for a further period of 2 months while the Commission considers its position.

The MCA has collected market data from a variety of internal and external sources, including providers of electronic communications networks and services, in order to carry out thoroughly its respective market definition and market analysis procedures based on established economic and legal principles. The MCA is also taking the utmost account of the Recommendation on relevant markets and the SMP Guidelines.

01.2 Consultation

As required by Article 10 of the ECRA, the MCA is to publish the results of the market reviews and to provide operators the opportunity to comment on the findings prior to adopting the final proposals.

Furthermore, Regulation 6 of the ECNSR establishes that, prior to adopting the draft measures proposed in the market review the MCA is required to notify the Commission with the findings of the market review, the proposed remedies and the outcome of the national consultation process.

The consultation period was carried out between the 29th August and the 30th September 2008. The MCA has not received any comments on this consultation document and

² Link to market review methodology: <u>http://www.mca.org.mt/infocentre/openarticle.asp?id=513&pref=1</u>



considers that all interested parties agree with the findings of this review. The EU Commission has also agreed with the findings of this review and has published a No Comments letter which is available on the MCA's website³.

01.3 Liaison with Competition Authority

Under Regulation 10 of the ECNSR, the MCA is required to carry out an analysis of a relevant market within the electronic communications sector. This analysis has also been carried out in accordance, and where appropriate, with an agreement with the National Competition Authorities (NCA) under Regulation 10 of the ECRA.

In line with the cooperation agreement signed on the 20th May 2005 between the MCA and the Office of Fair Competition $(OFC)^4$, the MCA initiated a two-week consultation process with the OFC. The response of the OFC to this decision is available on the MCA's website⁵.

01.4 Structure of the document

The rest of the document is structured as follows:

Chapter 02 presents the MCA's conclusions on the definition of the market for the wholesale broadcasting transmission services markets in Malta. This section consists of a review of the market definition procedure and its scope, as well as demand-side and supply-side assessments at the retail and wholesale level;

Chapter 03 presents the MCA's three criteria test analysis for the markets identified and outlines a view on whether these market meet the three criteria or no; and

Chapter 04 provides an outline of removal of remedies.

01.5 Scope of this Review

This review considers the market for wholesale broadcasting transmission services, which includes the provision of wholesale services for the transmission and delivery of broadcast content to end-users.

³ <u>http://www.mca.org.mt/infocentre/openarticle.asp?id=1250&pref=5</u>

⁴ <u>http://www.mca.org.mt/infocentre/openarticle.asp?id=656&pref=9</u>

⁵ <u>http://www.mca.org.mt/infocentre/openarticle.asp?id=1251&pref=9</u>



Chapter 2 Market Definition

In identifying the relevant markets, the MCA is required to take utmost account of all applicable guidelines and recommendations issued by the European Commission. In formulating its approach to the market definition, the MCA has paid the utmost regard to the Commission's Recommendation on relevant markets.

In this regard the MCA clarifies that for the purpose of this review it is still referring to the Recommendation of the 2003 given that this notification is part of the first round of market reviews. Nevertheless, the MCA has also taken into account the new Recommendation published in December 2007 and ensures that the market definition presented hereunder is also compatible with the text of the new Recommendation.

Where the proposed market definition differs from the Commission's Recommendation, the difference is identified and justification given in the light of the national circumstances which justify this departure, in the manner prescribed by the Recommendation.

The MCA analysis has been carried out on a forward-looking basis and, where it is thought possible that market conditions may change significantly during the time of this review, these changes are identified and discussed. The MCA's approach in assessing the markets is based on an analysis of competition levels and an assessment of the extent to which switching among services by consumers constrains prices, irrespective of the infrastructure used by the providers of those services.

In its 2003 Recommendation on relevant markets, the Commission had identified a market for wholesale broadcasting transmission services. However this market was subsequently removed from the revised 2007 Recommendation. The MCA is hereby conducting an assessment of the market for wholesale broadcasting transmission services in order to validate its appropriateness in the Maltese context.

02.1 Background to broadcasting services in Malta

According to statistics published by the National Statistics Office (NSO)⁶ the total population of Malta stands at approximately 405,000 and there are approximately 128,000 residential units and 31,000 non-residential units.

In a survey commissioned by the MCA and carried out in February 2007, 99.5% of the respondents stated that they have at least one television set at home, and 60% of those who did not have stated they where purchasing one during that year. This equates to almost to a 100% penetration of television sets in Maltese households.

In the same survey only 19% stated that they are still using the analogue terrestrial receiver as their main television connection, whilst 67% stated that they do not have analogue terrestrial receivers, and 14% stated that they still have it along with other forms of pay-tv services.

Melita plc. owns a nationwide cable network and has been providing analogue cable television since 1991. Melita deployed its network and provided cable television services under a legal monopoly status, which ended on 1^{st} January 2003 following the

⁶ <u>http://www.nso.gov.mt/</u>



liberalisation of the electronic communications market. In 2005 Melita also launched its digital cable television and radio services.

During July 2005 the first Digital Terrestrial Television (DTTV) operator Multiplus Ltd.⁷ launched its services. Multiplus was one of the two operators (the other operator was Maltacom/GO) which where assigned frequencies to deploy a DTTV network. In December 2006 GO took over Multiplus and a re-assignment of frequencies took place.

There are currently 4 analogue free-to-air terrestrial broadcasting stations in Malta. Each broadcaster owns the transmission equipment and transmits nationwide. Given the proximity of the Maltese Islands to Sicily and southern Italy, Maltese television viewers are also able to receive a number of Italian television analogue and unscrambled digital channels with their VHF/UHF antenna. However reception of these channels depends on the topology of the receiving site as well propagation conditions. As a result Maltese television viewers are accustomed to having a good choice of free-to-air television channels, which include major Italian television channels such as the national broadcaster RAI and commercial stations such as Mediaset.

There are 1 AM and 13 FM national radio stations in Malta. A number of Italian radio stations can also be received. Furthermore, a large number of local (community) low signal radio stations are currently in operation. Digi B Networks Ltd. is the only licensed terrestrial digital audio broadcasting (DAB) operator in Malta, which have started trial transmissions In July 2008. The operator will use the DAB+ standard to broadcast in Malta⁸.

There are no registered Satellite television operators in Malta, however a number of households have purchased a satellite receiver with which they can view unscrambled satellite channels and also pay-per-view channels by purchasing conditional access cards.

In early January 2006, GO's mobile arm – Go mobile – launched mobile TV services using EDGE technology. Since then the mobile operator has increased its channel line-up to including local and foreign television stations.

02.2 Radio broadcasting services

2.2.1 Analogue terrestrial radio broadcasting

There are a large number of analogue terrestrial radio stations in Malta. Whilst no demand for medium wave AM radio stations has been registered for a long time, national and local FM radio stations have increased significantly over the past decade.

To date only one licence has been issued for an AM radio and there have been no further expressions of interest to provide such a service. This AM radio station is operated by the public broadcasting operator (PBS) and has a nationwide coverage. The operator owns the transmitter and antenna.

Over the past years 13 national FM radio licences have been issued and are in operation (see Appendix 2). All of these FM stations have national coverage. Malta has 16 frequencies available and 3 have not yet been assigned.

⁷ Hereinafter referred to as Multiplus

⁸ <u>http://www.digibnetwork.com/site/portal.asp</u>?



FM radio operators are obliged under the Broadcasting Act 1991, to use a common master antenna for transmission. The Broadcasting Authority⁹ owns the master antenna, combiner and the site where all this transmission equipment is located.

The present combiner for this antenna has only one port available and therefore additional capital expenditure is required to enable further transmitters to operate from this master antenna. All FM station operators own their own transmitters.

Apart for national FM stations a large number of local (community) radio stations are in operation (see Appendix 3). These stations are designed to service a small geographical area. As at March 2008, 25 permanent community radio licences and a number of temporary licences were issued. All these operators own their own transmitter, antenna and mast. Applications for an operating licence are only limited by the amount of available frequencies which to date have been satisfied even within the same geographical area.

Apart from the national analogue terrestrial radio stations, end-users are also able to receive a number of Italian free-to-air radio stations.

2.2.2 Digital terrestrial, cable, satellite and mobile radio

In August 2005, the Maltese Government in conjunction with the MCA issued a policy and implementation strategy for the allocation of terrestrial Digital Audio Broadcasting (DAB) frequencies¹⁰. Later in the year the MCA auctioned the available DAB licences for the establishment of a DAB network. At the time of auction, Malta had 3 VHF blocks and one L band block.

In July 2006 a network licence was issued to Digi B Networks Ltd. to operate the DAB network. This licence was updated in January 2008¹¹ which is also the start of 18 month rollout period. The MCA is informed that roll-out is at an advanced stage and trial transmissions have commenced on the 1st July 2008, whilst commercial transmissions are set to start in October 2008¹². The standard being adopted for transmission is DAB+ which allows more services to be broadcast at higher audio quality.

Melita plc. owns and operates a nationwide cable network which is currently offering endusers different analogue and digital television and radio packages. With the digital television packages Melita bundles 61 digital radio stations including national Maltese FM stations. No radio channels are bundled with the analogue TV packages.

Although no satellite operators are registered in Malta end-users having a satellite system can receive to free-to-air satellite radio stations.

Go Mobile also offers a number of national radio stations transmitted over their mobile network. End-users access the radio stations by dialling a mobile number and they will be able to hear radio transmissions. The service is at a charge and is available both locally

⁹ <u>http://www.ba-malta.org/</u>

¹⁰ <u>http://www.mca.org.mt/infocentre/openarticle.asp?id=689&pref=12</u>

¹¹ <u>http://www.mca.org.mt/infocentre/openarticle.asp?id=1152&pref=12</u>

¹² <u>http://www.ba-malta.org/prdetails?id=130</u>



and abroad.

02.3 Television broadcasting services

2.3.1 Analogue and digital terrestrial television broadcasting

There are four national free-to-air television broadcasters licensed in Malta, all of which are in operation. One of the analogue stations is operated by the public broadcaster (PBS), whilst the other three stations are privately owned. These stations have been in operation for a number of years now and have a nationwide coverage.

All analogue terrestrial television operators own their transmitters and antennae. Two of the stations use the government owned master antenna tower for transmission, whilst the other two stations use their own towers.

The government has established a turnoff date for analogue terrestrial television by 2010. Analogue terrestrial television has been superseded by digital television and it is therefore a slowly dying market. Given this scenario the government has also imposed a moratorium on the issuance of new analogue terrestrial television licences. This practically curtails the possibility of new analogue terrestrial television broadcasters.

Existing analogue terrestrial broadcasters have each been assigned one analogue frequency which is entirely used for self-supply broadcasting services. The licensed operators are responsible for the content transmitted over their own channel.

Apart from the four national analogue terrestrial channels, end-users are also capable of viewing a number of Italian free-to-air analogue terrestrial channels.

During 2005 the MCA licensed two operators for the deployment of national digital terrestrial television networks, Multiplus Ltd. and Maltacom plc. Each operator was assigned eight multiplexes.

Multiplus Ltd. started offering commercial digital terrestrial television services in mid 2005. At the time Maltacom plc., had not yet started the rollout of its network. In December 2006 Maltacom plc. (GO) acquired Multiplus Ltd. and the MCA had to undergo a re-assignment process for the digital frequencies. Subsequently the MCA had assigned 8 frequencies to GO. Today GO has achieved more 95% coverage with its DTTV network.

The digital terrestrial television service is operated as a subscription-based service. All digital terrestrial television packages offered by GO require an antenna and a set top box, which is supplied by the operator itself.

2.3.2 Analogue and digital cable television

The cable network has been established by Melita plc. since 1991 under a legal monopoly and has nationwide coverage. From 1991 till 2005 Melita offered analogue television services however in early 2005 Melita also started offering digital cable television services.

The cable network is a 660 MHz system having a 5-40 / 55-650 frequency split. The former frequencies are used for the upstream path and the latter for the downstream path. At present the system is capable of supporting a total of 73 downstream frequencies. Four of these frequencies fall in the frequency range of the aircraft band and are not utilised.



The system also supports the carriage of FM radio over a portion of the FM band from 88–103 MHZ. At present out of the 73 frequencies, 53 are used for analogue television channels and 15 are used for digital television channels.

Cable television is a subscription-based service for both the analogue and digital services. A set top box (STB) is required for both the analogue and digital service which are supplied by the operator. The basic analogue service package (reception tier) is unscrambled and therefore does not require an STB, however a monthly fee is charged to end-users.

Although the cable operator is offering digital services, no analogue turn off date has been mandated on the cable operator. It is therefore up to the cable operator to decide if and when it would discontinue this service.

2.3.3 Satellite and Mobile television broadcasting

As stated earlier, there are no registered satellite television operators in Malta. Nevertheless, a number of households have purchased a satellite receiver with which they can view free-to-air satellite channels and also pay-per-view channels via conditional access cards. Given that these operators are not registered in Malta, these operators are not regulated in any way. Furthermore, the MCA is not aware that any local broadcaster is using a satellite operator for transmitting broadcast content.

In January 2006, Go mobile launched mobile television services using EDGE technology. Since its launch the mobile operator has increased its channel line-up to 14 channels including a range of national analogue terrestrial channels and foreign channels. In order to access this service the user needs to have an EDGE and/or 3G compatible mobile phone.

02.4 Method for defining broadcasting markets

In the February 2003 Relevant Markets Recommendation, the Commission defined a wholesale market for broadcasting transmission services (Market 18). In the revised Recommendation of December 2007 this market has been removed, since the EU Commission has established that the market does not pass the three criteria test.

As this analysis is being carried out as part of the first round of market reviews (following the withdrawal of the December 2006 notification) but, at the same time, following the adoption of a revised Recommendation that excludes the broadcasting market, the MCA will be defining any broadcasting markets based on the three criteria test. In this manner the MCA would be satisfying the requirements outlined in both the 2003 and 2007 Recommendations for regulating (or otherwise), any broadcasting markets to be defined hereunder.

The Recommendation on relevant markets clearly states that the starting point for market definition is a characterisation of the retail market over a given time-horizon, taking into account the possibilities for demand and supply-side substitution. The wholesale market is then identified subsequently to this exercise being carried out in relation to the retail market. This approach is that being followed by the MCA's in defining markets.

02.5 Delineation of retail radio broadcasting markets

End-users are capable of receiving a radio transmission service through a number of different technologies and end-user equipment. The most popular means of radio



listening is through a normal radio receiver which is capable to capture the terrestrial analogue radio signals which are transmitted free of charge.

All national terrestrial analogue stations have practically nationwide coverage and therefore end-users can receive these stations anywhere in Malta. From an end-user perspective, AM and national FM stations are substitutable in the sense hearers can choose freely to listen to any of the radio stations being transmitted.

Furthermore Maltese radio listeners can also choose to listen to Italian radio broadcasts given the transmission spill over from Italy. The quality of the signal depends on the location, weather conditions and sensitivity of the end-user equipment.

Community radios are not available nationwide and therefore the signal is captured only in the area of coverage of the particular radio. An end-user falling within the area of coverage is free to tune in to the community radio channel. As a result end-users would find community radio a substitute to national and international AM and FM radio stations, however only within the area of coverage of the community station.

One of the main distinctions between radio stations being broadcast over analogue terrestrial networks and the cable network is the element of mobility. End-users are able to receive terrestrial analogue radio stations anywhere in the country. On the contrary cable and satellite radio can only be accessed from the particular place where the cable decoder or the satellite receiver is installed. As a result end-users would not find it substitutable to listen to cable radio when they are on the move as opposed to terrestrial radio stations.

In order to receive radio stations over the cable network the end-user would also have to purchase a television connection given that radio stations are bundled with the digital television packages. As a result, the end-user would not find it substitutable to purchase a digital cable television package to receive radio stations when these can be received for free over terrestrial networks. As a result cable radio is not a feasible substitute to terrestrial analogue radio stations.

Similarly, an end user would not find satellite radios stations an appropriate substitute to terrestrial analogue radio stations. Although there are free-to-air satellite radio stations, an end-user would need to purchase a satellite receiver system to capture the radio signals. Such an expense would not be feasible to sustain given that analogue terrestrial radio stations can be captured with any radio receiver.

The DAB operator has not yet started commercial operations however the level of demand side substitution between the traditional analogue terrestrial transmission and DAB is expected to be low. This because an end-user would not be capable to listen to any radio station broadcasted over the DAB network with the existing radio receiver. Furthermore, the network operator in Malta is already using DAB+ as transmission format which requires a different receiver than DAB. Therefore an end-user would have to purchase a new digital receiver to capture DAB+ transmissions.

The availability of this equipment is still limited given that DAB+ is a relatively a new technology. Although very recently the DAB operator has started to offer DAB+ radio receivers at a subsidized rate, many users will not upgrade their receivers overnight. Furthermore, unless DAB+ becomes standard format used by the industry in producing radio receivers (for example in car stereos) it is unlikely that this equipment will available to many with the timeframe of this review.

Due to these considerations the MCA expects that over the two year timeframe of this



review the take-up of DAB+ is likely to be low. Consequently end-users are not likely to consider DAB+ as a feasible substitute to analogue terrestrial radio for the time being.

The MCA therefore concludes that at retail level end-users consider all terrestrial analogue radio broadcasting transmission services as being substitutable. Cable, satellite and DAB+ radio all fall into separate markets since end-users would need different equipment to capture the radio transmission, and would also pay a subscription for cable.

02.6 Delineation of wholesale radio broadcasting markets

2.6.1 Demand-side substitutability

At a wholesale level a national AM or FM radio broadcaster would not find it substitutable to acquire a licence to operate a community radio given the limitation on the geographic area in which it can be received. This would mean that a large number of its potential audience is lost with a negative impact on its advertising revenues which is the main source of income.

On the other hand a community radio broadcaster would consider acquiring a national broadcast licence only if it finds that the additional investment required would be compensated with an increase in audience and advertising revenues. Very often community radio broadcasters have specialised content that would be popular within the local area of coverage but may not be as popular on a national level. This would impinge on the potential benefits of upgrading the transmission to a national one. Furthermore the limited number of available national frequencies may also pose a constraint for the community radio broadcaster.

All national AM, FM and community radio broadcasters can reach their audience through any radio receiver and free of charge. These two characteristics would not make it feasible for any of these broadcasters to switch their transmission from an analogue terrestrial network to be carried solely on a cable or satellite network system. Such a move would clearly result in a reduction in the potential audience and a potential decline in advertising revenues. At present all national FM radio broadcasters are being retransmitted over the digital cable network for free. However end-users would need to acquire a digital television package to be able to listen to radio broadcasts. Consequently, for any analogue terrestrial broadcasters there is no substitutability between the analogue terrestrial network and cable and/or satellite infrastructure.

An analogue terrestrial broadcaster would similarly not find it feasible to be carried solely on a DAB+ network since this would mean that only end-users with a digital audio receiver would be able to capture the transmission. As DAB+ is still an emerging technology, digital receivers are not widely available and therefore only few (if any) endusers would be able to receive the transmission. Consequently a broadcaster would consider being transmitted over a DAB+ network as a compliment to the existing analogue terrestrial transmission rather than a substitute.

2.6.2 Supply-side substitutability

The MCA has assessed whether a hypothetical 10% increase in price of the transmission of radio broadcasting on a particular platform would induce new entrants or existing network operators to offer radio broadcasting transmission services. It is most likely that following such a price increase the most credible supply-side substitution would happen from existing networks particularly cable and satellite operators. However a terrestrial analogue radio broadcaster would not find it feasible to be carried solely over a cable or satellite network given that these do not offer mobility. Furthermore, radio stations



transmitted over the cable network are bundled with television packages and therefore the service is not available for free to end-users.

Following a price increase a DAB network operator may consider offering access on its network. Radio broadcasters would find this option feasible depending on the potential audience reachable through the DAB network. The MCA believes that for the timeframe of this review a broadcaster would not find it feasible to rely solely on DAB broadcasting given that digital audio receivers are not widely available. Consequently the MCA believes that supply side substitution would not be feasible.

2.6.3 Conclusion

Based on the retail and wholesale evidence outlined above the MCA takes the view that national AM and FM analogue terrestrial radio broadcasting transmission services fall in the same market. Due to their limited geographic scope community radio broadcasting transmission services fall in a separate market from national radio broadcasts.

Nevertheless, the MCA is not defining any wholesale markets for the provision of wholesale broadcasting transmission services of AM, FM and community radio services as these broadcasters cannot provide wholesale services. From a legal perspective all analogue radio broadcasting licences stipulate that the frequency is to be used by the licensee only. Similarly from a technology perspective the broadcaster uses the whole frequency to transmit and cannot therefore offer wholesale services. Furthermore, Article 32(1) of the ECRA clearly states that the use of frequencies and apparatus to be used for the provision of broadcasting services do not require an authorisation from the MCA, which implies that these services fall outside the regulatory remit of the MCA. Consequently, the MCA will not define any wholesale markets with respect to analogue radio broadcasting transmission services.

With respect to radio broadcasting transmission services provided over cable and satellite networks the MCA concludes that each service falls in an individual separate market.

Although the DAB+ network operator has not yet launched commercial services, the lack of demand and supply side substitutability with other forms of radio transmission services indicate that DAB+ would fall in a separate market.

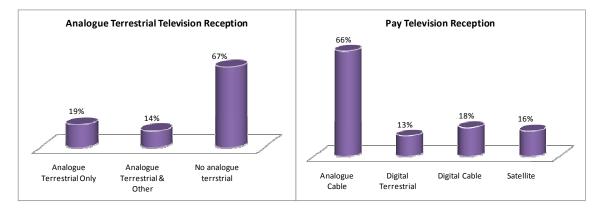
02.7 Delineation of retail television broadcasting markets

2.7.1 Platform Penetration and Switching patterns

End-users have a choice of possible television reception platforms. Nearly all end-users have access to five television broadcasting networks namely the analogue and digital terrestrial networks, analogue and digital cable networks and satellite TV. This implies that end users have a choice whether to switch between platforms depending on their preferences.

In a survey commissioned by the MCA and carried out in February 2007, 99.5% of the respondents stated that they have at least one television set at home. The survey also indicated that the majority of Maltese households opt for a pay television service with a number having multiple connections. The following two graphs illustrate the type of television connections that residential house holds had at the time of the survey.





The graph on the left shows the penetration of analogue terrestrial television connections in households. An interesting indicator from this table is that 67% of all households have removed this reception platform whilst another 14% have it in conjunction with a pay services. This shows that 81% of households in Malta have access to some from of pay television service.

The second graph shows the distribution of pay television services amongst these 80% of households. The most popular pay television service remains the analogue cable service with a penetration of 66% at the time of the survey. As a number of households have multiple pay television connections, adding the percentages would give a figure larger than 100%.

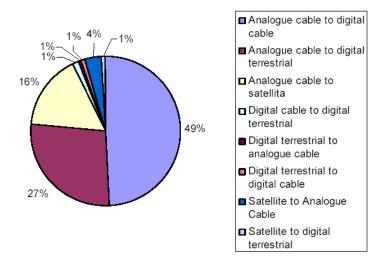
The survey shows that 19% of the households still rely exclusively on the traditional analogue television receiver. There are currently four local analogue terrestrial television broadcasters which transmit nationwide. However given the proximity of Malta to Italy, households can also receive spill-over television signals from Italy thus increasing considerably the number of channels that a Maltese household can view using the analogue receiver. This largely explains why this significant percentage of people does not yet have a pay television service.

This kind of end-user would not consider any pay television service as being substitutable to the analogue terrestrial service since the latter is provided for free.

In the same survey 17% of the respondents stated that they had switched between television connections. The graph below summarizes the churn¹³ patterns observed from the survey in the two years prior to February 2007.

¹³ In this report churn refers to end-users who switched between connections.

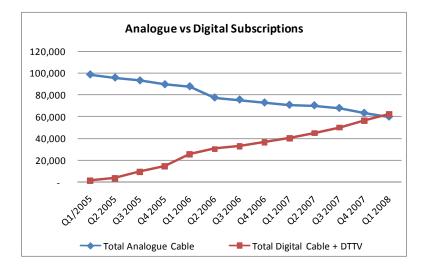




The major switch pattern seems to be between the analogue cable and the digital cable services with 49% of the churn, whilst 27% switched from analogue cable to digital terrestrial. A notable 16% also stated that they switched from analogue cable to satellite. These figures show that overall end-users seem to be moving away from the analogue cable connection to a digital connection, being its cable, terrestrial or satellite. Such a pattern is expected to be observed as end-users opt for better quality and increased number of channels on a digital platform.

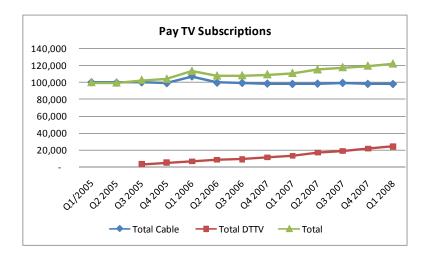
2.7.2 Substitution between analogue and digital cable

The churn patterns identified in the survey can be further reinforced by depicting the actual substitution trend between the analogue cable and the digital cable and terrestrial connections.



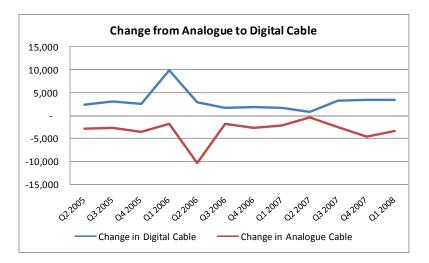
Since January 2005 the number of digital television subscriptions has topped to more than 62,300 whilst analogue cable connections has decreased from around 98,500 to 59,700 by March 2008. Despite this observed substitution pattern between analogue and digital connections, the market for pay television subscriptions is increasing as shown in the graph below.





Over the past three years the total number of subscriptions increased from 100,000, when analogue cable was the only pay television platform available, to more than 122,000 in March 2008. This 22% increase in pay television subscriptions indicates that since the introduction of digital television more consumers are opting for an alternative television subscription to the traditional analogue terrestrial platform.

An interesting observation that emerges from the diagram above is the fact that whilst the total digital terrestrial connections are increasing, total cable connections have remained relatively stable throughout the past three years. This indicates two main trends. The first is that with the entry of digital terrestrial operator, increased choice and lower prices encouraged new end-users to opt for a digital connection. The second trend is that the increase in digital cable connections is largely attributable to switching from the analogue cable service. Although logically there are new end-users who purchased a digital cable connection and some end-users who switched from analogue cable to digital terrestrial, the diagram below shows that overall there was an almost one-to-one substitution from the analogue cable to the digital cable service.



The graph clearly shows that the disconnections from the analogue cable service were registered as new connections on the digital cable network. The spike recorded in Q1 2006 is the result of an opt-out scheme that the cable operator launched to migrate customers from the analogue service to the digital service. A large number of analogue subscribers decided to switch to the digital service whilst others decided to opt out of this scheme. Nevertheless, the graph clearly shows that there exists a clear correlation



between disconnections in the analogue service and new connections in the digital cable services.

2.7.3 Substitution between analogue cable and digital terrestrial

A similar clear trend for substitution between analogue cable and digital terrestrial services cannot be observed directly from the data submitted by operators, as the data does not distinguish between new users and churn. A first indicator pointing towards the substitutability between the two services has already emerged from the survey carried out by the MCA where 27% of the respondents stated that they had switched operator. Other indicators such as price, switching costs and channel line-up also seem to suggest that switching between analogue cable and digital terrestrial is possible.

The table below compares the available packages on the three different platforms in terms of prices and number of channels.

	Entry P	ackage	Medium	Package	High Packge			
	Channels	Price €	Channels	Price €	Channels	Price €		
Analogue Cable	17	7.76	30	11.65				
Digital Cable			55	16.3	96	29.12		
Digital Terrestrial	18	2.33	39	13.98	52	23.29		

The entry level package on the analogue cable network includes 17 channels¹⁴ which are mostly free-to-air Maltese and Italian television channels and is priced at \in 7.76. This service does not require a set top box (STB). The digital terrestrial entry package includes an almost identical channel line up of 18 free-to-air channels at the cost of \in 2.33 which is required for the conditional access card. This service requires an STB and the installation of a small aerial. The digital terrestrial network operator is offering a number of special offers whereby end-users can get the STB for free subject to a two year contract. Alternatively the STB can be hired for \in 65.22 as an upfront one time fee.

The medium level package of the analogue cable provider includes 30 channels at a price of $\in 11.65$. These channels include the free-to-air channels plus other foreign channels. The digital terrestrial medium package comes at a price of $\in 13.98$ and includes 39 channels made up of free-to-air channels and other premium channels. Both of these services require an STB. The digital terrestrial STB can be leased at $\in 65.22$ one time non-refundable fee, whilst the analogue cable operator charges a connection fee of $\in 54$ for the installation and STB and is also non-refundable.

For the end-users a substitution between analogue cable and digital terrestrial is possible in terms of pricing and channel line up. In terms of price the entry level digital terrestrial package is far more economical than the analogue cable however the main difference between the two services remains the STB for the digital terrestrial service. However with the ongoing special offers customers wishing to enter in a two year agreement can obtain the STB for free, thus making the switching less costly. Therefore substitution is possible however this depends on the willingness of the individual end-user to switch to a service with a STB.

Substitution between analogue cable and digital terrestrial for the middle package is very possible since the price differential is minimal and the customer will get access to nine

¹⁴ See Appendix 1 for a complete list of channels.



more channels with digital terrestrial service. As opposed to the entry level package, in this case both services require a STB. Consequently, the end-users would already be accustomed to a STB and therefore would not place as much importance on this factor when deciding to switch service. Nevertheless, there always remains the cost of losing the deposit or connection fee should the end-user decide to terminate the service.

Substitution from digital terrestrial to analogue cable is also possible however it is not generally observed since end-users are likely to opt for a better quality service provided by the digital service. The survey in fact shows that only 1% made such a switch.

2.7.4 Substitution between digital cable and digital terrestrial

From the survey the substitution between digital cable and terrestrial seems to be negligible with only 2% stating that they have switched one way or another. This is expected since both services at the time of the survey in February 2007 were relatively new and therefore few end-users would have considered switching. Furthermore, there are a number of similarities between the two services such that it would make switching possible but only depending on individual taste.

Starting with pricing of the services the two operators offer two packages¹⁵, one as the mainstream package and the other for the more demanding customers. The pricing of the digital cable packages is in both cases more expensive than that of the digital terrestrial provider however this is compensated with more channels. The medium package for the cable operator is priced at \in 16.30 and includes 55 channels whilst the equivalent package on the digital terrestrial network costs \in 13.98 and includes 39 channels. The high end packages are priced \notin 29.12 for the digital cable and \notin 23.29 for the digital terrestrial service, and include 96 and 52 channels respectively.

In terms of pricing and channels it is clear that individual choice determines the switching pattern. An end-user that seeks a cheaper service as opposed to more channels would opt for the digital terrestrial service. On the contrary a demanding end-user would opt for the digital cable service. In this case the channel line up also acts as a determining factor on the extent of switching between services. This again is a purely individual choice and no patterns can be established especially when considering individual taste in terms of content.

Switching costs between digital cable and digital terrestrial includes the cost of the one time fee of \in 65.22 for the digital terrestrial STB, and a connection fee of \in 86.19 for the digital cable installation and STB. In the case of the digital terrestrial provider special offers are in place from time to time whereby the STB would be given for free subject to a two year contract. Although this cost has to be factored in, this is not considered to be a major barrier to switching when considering the monthly fee end-users pay for this kind of service.

For some end-users another important consideration for choosing and switch to a particular service depends on the sports channel/s. Both the digital cable and terrestrial operators offer a range of sports channels featuring different sporting events. The sports channels can only be purchased as an add-on to one of the packages offered by the individual operators and cannot be purchased as a stand alone service. The two operators have exclusive rights over certain types of events, most notably, football matches. Consequently, an end-user wanting to view for example the Italian Serie-A

¹⁵ The entry level package of the DTTV operator is being excluded from this comparison since this includes mostly free-to-air channels and does not offer any premium content like the more expensive packages.



league would only consider purchasing a digital cable connection. Whilst this additional consideration is not applicable to the majority of the end-users (there are only around 15,000 sport channel connections), for some it is a determining factor.

In conclusion the MCA believes that substitution between digital cable and digital terrestrial is possible since there are no major barriers to switching. However, any such decision would be mainly influenced by the individual notions on price and value of packages on offer, or the desire to watch specific content, rather than technology.

2.7.5 Substitution between satellite and other television platforms

The survey showed that 16% of households have a satellite connection. Considering that there is no satellite operator licensed in Malta and the upfront sunk cost to set up a satellite receiver, this penetration rate is significant.

Nevertheless, the survey also shows that 81% of those respondents who had a satellite receiver said that they pay between $\in 0$ and $\in 11.64$ a month for receiving satellite broadcasts. Since there are no registered satellite providers in Malta it is reasonable to assume that the majority of these end-users do not pay anything for receiving satellite broadcasts and instead receive only unscrambled channels.

The survey also highlighted that 16% of respondents switched between analogue cable and satellite. Though this represents a significant number of users switching between these two platforms, the actual data obtained from the cable operator does not show a similar reduction in analogue cable connections. This implies that end-users did not disconnect their analogue cable connection but rather purchased a satellite receiver as a complementary service.

As no local broadcaster is broadcasting over satellite, end-users are required to have another platform through which they can capture local television stations. This point further reinforces the view that satellite and analogue cable are complementary services.

The cost of acquiring a satellite receiver is much higher than that of any other platform in the market. With the cable or digital terrestrial network end-users are required to lease a STB against a one time fee which is much less than the cost of purchasing a satellite receiver. Thus in terms of switching costs the majority of end-users would not consider a satellite receiver an appropriate substitute to cable or digital terrestrial.

The MCA concludes that whilst 16% of households have access to a satellite receiver, this is not considered to be a substitute to any other television platform at a retail level. Data available to the MCA shows that satellite is largely considered as a complementary service to other platforms. The high sunk costs associated with the satellite receiving equipment, is considered to be significant compared to the cost of end-user equipment for other television platforms.

2.7.6 Conclusion

The MCA concludes that from the consumption patterns observed in the market over the past few years at a retail level, end-users relying solely on the analogue terrestrial platform do not consider any of the pay television platforms as substitutable.

From the observed switching patterns and comparisons it appears that end-users find analogue cable, digital cable and digital terrestrial as substitutable. The price comparison, channel line-up and switching costs all suggest that switching is possible and has in actual fact occurred as confirmed by the results of the survey. It also emerged that



switching at retail level largely depends on individual preferences in terms of content rather than technology platform.

A good number of households have a satellite receiver, however this was found to be more of a complementary service to other pay television services rather than a substitute. Switching costs are high with respect to satellite services as this involves a significant upfront sunk cost to purchase the receiver. The MCA believes that satellite is a separate retail market from other pay television platforms.

02.8 Delineation of wholesale television broadcasting markets

A television broadcaster can choose from a number of platforms on which to deliver its content to end-users. As outlined before there are five possible delivery platforms in Malta: analogue terrestrial, digital terrestrial, analogue and digital cable, and satellite platforms. All of the broadcasting networks in Malta have a nationwide coverage and can reach to more than 95% of households.

When assessing demand-side substitutability for a broadcaster between transmission services provided over different platforms, a number of factors need to be considered, namely; network coverage, target audience, legal limitations, cost of carriage and quality of the transmission. In the assessment of supply side substitutability, capacity constraints, investment and sunk costs, and timely provision of services are the main factors to consider.

2.8.1 Analogue terrestrial transmission

Demand Side Substitution

All the existing national analogue terrestrial broadcasters have their own transmission network and are therefore in control of their transmission costs. Given that the analogue frequency assigned to each operator is fully utilised by the same operator (self supply), there is no possibility for the provision of wholesale services to third parties. Consequently, following a hypothetical increase in the price of transmission services over other broadcasting networks (e.g. cable, digital terrestrial), a broadcaster would not find any of the analogue terrestrial networks as a good substitute given capacity constraints.

As the analogue terrestrial network operator is also the broadcaster, an increase in the price of analogue terrestrial transmission would only happen if the costs of transmission increases in reality. This increase in the transmission cost would have to be borne by the broadcaster itself since it is an actual increase in the self supplied services. Consequently, following such a price increase the analogue terrestrial broadcaster would not consider switching to another broadcasting network.

New broadcasters aspiring to transmit their content over an analogue terrestrial network will also find that analogue terrestrial networks are not a potential option. As the target turn off date for analogue terrestrial transmission is set for December 2010, the government has imposed a moratorium on the issuance of new analogue terrestrial licences. This implies that new broadcasters would only be able to transmit their content over other platforms.

Supply Side Substitution

Technically, an existing analogue terrestrial broadcaster does not have the capability to offer wholesale broadcast transmission as it utilises all of its licensed bandwidth for its own programming services. This eliminates the possibility that following a price increase



by a hypothetical monopolist of a broadcasting network, an analogue terrestrial broadcaster offers wholesale services to third party broadcasters. At best the analogue terrestrial operator could offer the broadcaster limited airtime, however this is not considered to pose a sufficient constraint on a hypothetical monopolist such that it would make the price increase unprofitable.

Another limitation for the provision of wholesale broadcasting transmission services is posed by the licence to operate the analogue frequency. The licence is issued by the Broadcasting Authority and it stipulates that the frequency is only to be used by the licensee.

Conclusion

The MCA believes that given the capacity and legal limitations to the provision of wholesale analogue terrestrial transmission services, and the turn off date for December 2010, there is no credible demand or supply side substitution between analogue terrestrial networks and any other broadcasting platform at wholesale level.

The MCA also considers that this market is not an electronic communications market that falls within the regulatory framework of the MCA. Article 32(1) of the ECRA clearly states that the use of frequencies and apparatus to be used for the provision of broadcasting services do not require an authorisation from the MCA, which implies that these services fall outside the regulatory remit of the MCA. Consequently, the MCA will not define any wholesale markets with respect to wholesale analogue terrestrial broadcasting transmission services.

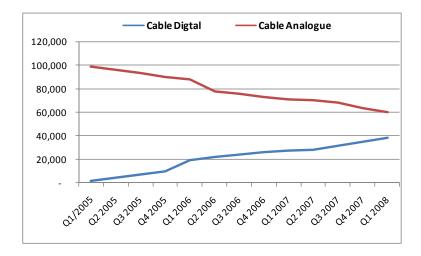
2.8.2 Cable transmission services

Demand Side Substitution

In terms of network coverage the analogue and digital cable networks have the same coverage of more than 95% of Malta. In reality, the access part and certain elements of the core cable network are shared between the two types of broadcasting platforms. Therefore in terms of coverage a broadcaster would find the analogue and digital cable network as substitutable.

The target audience that a broadcaster can reach over either of the cable platforms is however different. As shown in the figure below the number of households having access to the analogue cable network is more than the digital cable network, though the gap is narrowing steadily over time.





Based on this data a broadcaster wishing to target the majority of the cable network subscribers would opt for the analogue rather than the digital cable network. However since the number of digital connections is steadily increasing, the broadcaster could well decide to be carried exclusively on the digital cable platform.

At present the cable operator is carrying 7 out of the 8 local broadcasters on both the analogue and digital cable networks, thus providing the widest possible audience for the broadcasters. Therefore a local broadcaster being carried over the cable network has a potential audience of 100,000 cable subscribers, irrespective of the end-user's type of cable connection. All the foreign channels offered under the analogue cable packages are also offered with the digital packages.

Based on these factors it appears that so far a local broadcaster gaining access to the cable operator would enable it to be carried over both the digital and analogue cable platforms. This would suggest that for local broadcasters there is no distinction between the analogue and digital cable platform and are rather viewed as one cable network. For the 5 must carry local broadcasters the distinction is not applicable since they will be carried automatically on both platforms. For other commercial local broadcasters there is no obligation to be carried on both platforms, and such a decision is up to commercial negotiations. Nevertheless, the experience so far shows that commercial local broadcasters have managed to negotiate carriage on both platforms, suggesting that the analogue and cable network are in practice viewed as one network.

In terms of quality, both cable platforms support a high quality image with the only difference being that analogue cable does not support stereo sound transmissions. Substitution between cable platforms is therefore possible for the majority of the broadcasters with the exception of broadcasters having premium content (sports, or movies) which would require stereo sound. Nevertheless, the MCA considers that at present no local broadcaster would consider this factor as a barrier to switching from one platform to another.

At present the transmission cost for both the analogue and cable platforms is agreed upon by the network operator and the broadcaster through commercial negotiations. The cost is likely to be influenced by a number of factors including the countervailing buyer power of the broadcaster. Such countervailing buyer power is usually dependent on the quality of the content that the broadcaster brings along. The better the quality of the content, the more likely the network operator would carry the broadcaster at a cheaper price. The MCA does not have any information regarding the commercially agreed payments that local broadcasters pay to be carried over the cable platforms. However since all the local broadcasters that are carried over the cable network are in fact carried



over both the analogue and digital platforms, it seems that one payment (where applicable) is made for carriage over both platforms. This therefore shows that the commercially agreed carriage price does not discourage local broadcasters from being carried on the cable network. On the contrary broadcasters do not need to choose between the analogue and digital platforms since they are being carried on both. Nevertheless, should the cost of carriage increase, such that being carried over two platforms becomes too expensive, local broadcasters would be able to choose the one platform to be carried upon depending on their individual preferences.

Supply Side Substitution

A cable analogue channel can only carry one programme channel. On the other hand, a digital cable channel can support a larger number of program channels given that it is more spectrum efficient with the use of compression and modulation techniques. Therefore the capacity of the digital cable platform is far greater than that of the analogue cable platform.

In case of a hypothetical price increase in the price of analogue cable platform, a digital cable provider would be able to provide access to broadcasters within a short period of time and with no significant costs. On the contrary if a digital cable provider had to increase the price, an analogue cable provider would only be in a position to offer limited access to broadcasters depending on the excess capacity that it has.

In the local scenario the cable operator owns the two cable platforms and therefore it is the same operator that allocates the number of channels between the digital and analogue platforms. Therefore the cable operator has control over the excess capacity available on both platforms. From the developments observed in the past two years it is clear that the number of channels allocated to the cable analogue service have decreased considerably and there is no available capacity over the analogue cable network. Therefore for the cable operator to include a new analogue broadcaster it would have to either replace it with one of the existing analogue channels or alternatively use one of the digital channels. The latter option is however not desirable since a channel over the digital platform can accommodate more programme channels and is therefore used more efficiently.

The MCA believes that since all the local broadcasters carried on the cable network are present on both cable platforms, a price increase in carriage cost of the analogue platform would induce the local broadcasters to switch to the digital cable platform. A rise in the cost of the digital platform could potentially induce the local broadcasters to be carried only on the analogue platform. However this move is not likely to be beneficial for any of the parties since the cable operator is inclined to relocate its existing users to the digital cable platform. Furthermore, following an increase in the cost of carriage for the digital cable platform, broadcasters might also consider other platforms for carriage such as the digital terrestrial platform. A more detailed discussion on the potential substitutability between digital cable and digital terrestrial networks is presented in the next section.

The MCA does not believe that a hypothetical price increase in the cost of carriage of one of the cable platforms would induce any new operator to enter the market within a short timeframe. The investment costs associated with deploying a new cable network are too high to incur following a 5-10% price increase. The deployment timeframes for a cable network are too prohibitive to be considered relevant within the two year timeframe of this review.



Conclusion

The MCA believes that there is sufficient evidence in terms of demand and supply side substitution that would indicate that the analogue cable network and the digital cable network fall within the same market. The present market realities further indicate that where local broadcasters have gained access to the cable network (under must carry obligations or through commercial negotiations), broadcasters have been carried over both digital and analogue platforms, suggesting that the split between analogue and digital is not present under commercial agreements but is rather a technical issue. The MCA also considers that even within the timeframe of this review the penetration of digital cable would have increased to a level whereby it will be possible for local broadcasters to be carried exclusively on the digital platform if they so wish. However this option depends entirely on individual preferences of the broadcasters.

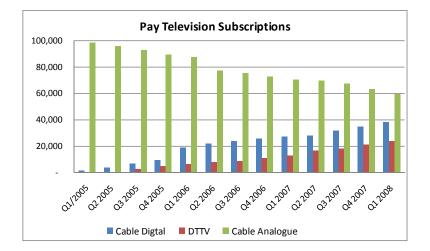
Consequently the MCA considers that the analogue and digital cable platforms in Malta fall within the same market.

2.8.3 Digital terrestrial transmission services

Demand Side Substitution

The digital terrestrial network has a nationwide coverage and can reach more than 95% of residential and business units. In terms of coverage the terrestrial network can therefore be a good substitute to any other broadcasting network present in Malta.

The potential audience that a broadcaster can reach through the digital terrestrial network has also increased considerably over the past year. The figure below shows the digital terrestrial subscribers compared to that of the other main broadcasting networks.



As at March 2008 there were around 25,000 subscribers connected to the digital terrestrial network which shows a positive increase compared to the 7000 subscribers two years before. The increase in subscribers is expected to continue during the timeframe of this review as more households switch from analogue services to digital services.

Compared to the cable operator, the digital terrestrial operator has a lower share of subscribers. Therefore in terms of potential audience a broadcaster carried exclusively on the digital terrestrial network would reach a lower number of households than if it were to be carried over any of the cable platforms.



Nevertheless, the MCA notes that one local broadcaster is carried only over the digital terrestrial network. UTV managed to negotiate a commercial agreement with the digital terrestrial operator and is today carried on the digital terrestrial network as part of its channel line-up. On the other hand, another national broadcaster was being carried only on the cable network. However, this broadcaster has recently started to be carried over the digital terrestrial network. Similarly, two other local broadcasters: ITV shopping channel and Family TV are to date being carried on the cable network.

The MCA therefore believes that in terms of potential audience, a broadcaster would likely opt for the widest possible audience; however market evidence shows that broadcasters are happy to choose their preferred transmission network/s. This shows that broadcasters are willing to be carried on one network, thus showing that networks are considered as substitutes rather than complements. Therefore a hypothetical price increase in the cost of carriage over network A could imply that a broadcaster would switch to network B, or if it is currently over more than one platform it would decide to be carried exclusively on one network only.

For substitution to be feasible a broadcaster would need to consider the financial implications as a result of the switch between different platforms, including revenues from advertising, subscriptions and other income and costs associated with the change of transmission platform. Since at present all the negotiations between the network operators and the broadcasters are done commercially the MCA does not have any information relative to switching costs. However, the MCA assumes that these costs are reasonable since broadcasters are not finding any difficulties in achieving access on commercial terms from either or both the cable and digital terrestrial network operators.

The digital terrestrial network offers the same quality that the digital cable platform offers and also supports stereo sound transmissions. Substitution between the digital terrestrial platform and the cable platform is therefore possible. Substitution between the digital terrestrial network and the analogue cable network is also possible. However the broadcaster will not have stereo sound on the analogue cable platform. Again the MCA does not consider this as being a barrier to substitution in the majority of cases for local broadcasters.

Supply Side Substitution

Following a hypothetical increase in the cost of transmission over the digital terrestrial network, no new supplier would find it feasible to deploy a digital terrestrial network to start providing transmission services. Spectrum limitations and the sunk costs involved in the building of such a network would make market entry practically impossible in the short run.

However following a hypothetical price increase alternative network operators would offer transmission services over their network. For example the cable network operator would find it feasible to offer access to broadcasters currently being carried over the digital terrestrial network or vice versa. The only limitation for this supply side substitution to happen would be capacity constraints.

At present the cable network can carry a higher number of program channels than the digital terrestrial network. The cable network operator can use the whole spectrum range on its network, and can decide the allocation between the analogue and digital programs. The more analogue channels are freed up the higher the number of digital channels can be supported. On the other hand the capacity of a digital terrestrial system is limited by the number of channels assigned to the network. Spectrum is a scarce resource and is shared between the existing analogue terrestrial television operators as well as with neighbouring countries. The present digital terrestrial operator has been assigned 8



frequencies and an increase in the number of channels would be difficult to achieve due to lack of available free spectrum.

From information available to the MCA it transpires that the analogue cable network and the digital terrestrial network are running at full capacity and therefore new broadcasters can only be accommodated if the network operator decides to substitute it with one of the existing channels. On the digital cable network there is some available capacity which would accommodate new broadcasters.

The MCA therefore concludes that technically supply side substitution between digital terrestrial and the cable platforms is possible however this depends on capacity constraints. So far all new local broadcasters have managed to secure access to at least one of the platforms, with many of them being carried on more than one platform. Furthermore, network operators might very easily replace an existing program channel with a new local program channel, depending on the quality of the broadcasts that the local broadcaster is providing.

Conclusion

The MCA believes that based on actual evidence in the past months, both demand and supply substitution between the digital terrestrial and the cable network is possible. Various factors indicate that depending on the willingness of operators to grant access to local broadcasters, commercial agreements have been achieved. Local broadcasters also consider these broadcasting platforms as being substitutable in the sense that some have chosen to be carried on one platform only, others on two platforms, whilst others on all platforms. Capacity constraints might limit the potential for supply side substitution however this has not been the case so far.

Consequently, the MCA believes that there is sufficient evidence to conclude that the digital terrestrial network and the digital and analogue cable networks form part of the same market.

2.8.4 Satellite transmission services

Demand Side Substitution

As stated earlier, there are no providers of satellite transmission services registered in Malta. Consequently, there are no Maltese broadcasters that use satellite transmission services to deliver broadcast content to end-users.

Following a 10% price increase by a hypothetical monopolist providing terrestrial or cable transmission services, a local broadcaster would not find it feasible to switch to satellite transmission. The cost of such a move would be prohibitive compared to the original price increase. Given the scale of the Maltese market and the number of satellite receivers, such demand-side substitutability is practically impossible to achieve.

As a result, there is no credible demand-side constraint on a hypothetical monopolist provider of terrestrial or cable transmission services, arising from the availability of satellite transmission services.

Supply Side Substitution

Similarly, no local operator would invest in a satellite network following a hypothetical increase in the cost of transmission by a satellite provider. Such investment would not be justified and possible within the short term.



Furthermore, it is highly unlikely that there is any correlation between the transmission costs of local network operators and any international satellite operators. Therefore following a hypothetical price increase by a satellite operator, local network operators are unlikely to start offering broadcast transmission services unless they are already doing so.

Conclusion

The MCA finds no evidence that wholesale broadcasting transmission services over satellite networks are a potential demand or supply side substitute to any of the local broadcasting transmission networks. Therefore satellite transmission services fall in a separate market from other broadcasting networks.

Since no satellite network providers are presently registered in Malta the MCA does not need to define a wholesale market for the provision of satellite broadcasting transmission services for the purpose of ex ante regulation, as this kind of service is not being provided in Malta.

02.9 Identified markets

Following the analysis of the retail and wholesale market conditions carried above, the MCA has concluded that the following wholesale markets in Malta exist:

- 1. Wholesale television and radio broadcasting transmission services over digital terrestrial, digital cable and analogue cable networks; and
- 2. Wholesale radio broadcasting transmission services over D-TAB networks.

02.10Geographic scope of markets

A relevant geographical market comprises the area in which the undertakings concerned are involved in the supply and demand of products and/or services, in relation to which the conditions of competition are sufficiently homogeneous and which can be distinguished from neighbouring areas because the conditions of competition are appreciably different to those areas.

According to the EU Guidelines, in the electronic communications sector, the definition of the geographical scope of the relevant market is generally determined with reference to the area covered by a network, and to the existence of legal and other regulatory instruments.

Based on the market boundaries and the market conditions described earlier on, the MCA concludes that the geographic scope for wholesale broadcasting transmission services provided over the digital terrestrial and the cable television and radio networks is national in scope.

The geographic scope of the market for D-TAB radio broadcasting is also national.



Chapter 3 The Three Criteria Test

03.1 Wholesale broadcasting services susceptible to ex ante regulation

In the analysis above the MCA identified two broadcasting transmission services markets, which are defined more narrowly than the market defined by the EU Commission in the 2003 Recommendation on relevant markets. The broadcasting market has been removed from the revised Recommendation on relevant markets of December 2007. Nevertheless, the MCA believes that throughout its assessment it has identified the markets based on competition law principles.

However, before establishing that any of the above-mentioned markets constitutes a relevant market for the purpose of ex ante regulation, the MCA needs to assess whether these two markets satisfy the three criteria test as outlined in the Recommendation on relevant markets. For each services market, the MCA therefore needs to assess:

- the presence of high and non-transitory entry barriers;
- the market must be a market the structure of which does not tend towards effective competition, during the timeframe of this review; and
- the application of competition law alone would not adequately address any market failures that may arise.

Paragraph 14 of the revised Recommendation on relevant markets states that when identifying electronic communications markets as justifying possible ex ante regulation, the above three criteria should be applied cumulatively, so that failing any one means that the market should not be identified as justifying possible ex ante regulation.

03.2 Wholesale television and radio broadcasting transmission services over digital terrestrial, digital cable and analogue cable networks

3.2.1 High Barriers to Entry

The deployment of any digital terrestrial or cable network on a national scale is subject to very high barriers to entry. The sunk costs, deployment timeframes and statutory barriers, all contribute to make market entry difficult within the short term.

Deploying a national cable network would require extensive planning and deployment costs related to ducting and trenching. These would further require costs and permits for rights of way. Deploying a cable network would also take a considerable amount of time and would go beyond the timeframe of this review.

On the other hand the deployment of a digital terrestrial network would require much less time and costs compared to a cable network, since there is no ducting and trenching costs involved. Nevertheless, the main entry barrier remains the availability of spectrum. Malta has coordinated a number of frequencies in the last RRC06 in addition to the existing 4 analogue frequencies. The present digital terrestrial operator has been assigned all coordinated frequencies intended for commercial use and therefore there are currently no available frequencies for new operators. This imposes a significant barrier to entry for new digital terrestrial providers.

The MCA therefore believes that the market for television and radio broadcasting transmission services over the digital terrestrial and cable networks presents high barriers to entry.



3.2.2 Level of competition – Retail level

Since the market entry in June 2005 of the digital terrestrial operator Multiplus Ltd. (which has since been taken over by GO plc. in December 2006), the retail market for pay television broadcasting services has experienced significant growth. Furthermore, service offerings from both GO and the cable operator Melita, have improved considerably.

Starting with the prices and packages, the tables below shows a comparison of the current packages offered by the two network operators with those offered in December 2006. Full details on channel line up are provided in Appendix 1.

	As at July 2008										
	Entry P	Entry Package Medium Package High Pack									
	Channels	Price €	Channels	Price €	Channels	Price €					
Analogue Cable	17	7.76	30	11.65							
Digital Cable			55	16.3	96	29.12					
Digital Terrestrial	18	2.33	36	13.98	50	23.29					

	As at December 2006										
	Entry P	Entry Package Medium Package High Pa									
	Channels	Price €	Channels	Price €	Channels	Price €					
Analogue Cable	19	7.76	34	11.65	55	26.79					
Digital Cable	45	16.3	75	26.79	85	53.58					
Digital Terrestrial	14	2.33	30	11.65	42	20.96					

On the analogue cable service the number of packages decreased from three to two at present. Whilst the prices of the analogue cable packages remained unchanged the medium package has four less program channels. Furthermore a number of premium channels, which in December where included in the middle package, have now been removed. These changes are not in themselves considered as positive, since analogue users are now getting fewer channels for the same price, however this indicates that the cable operator is trying to migrate analogue users to the digital cable service. The low end analogue cable package, which does not require a decoder, has also experienced a decline of two program channels.

When it comes to the digital cable service the current packages have also improved. Whereas in December 2006 there were three packages, today there are two packages. However end-users for ≤ 16.30 a month are now getting 75 program channels instead of 45 in December 2006. End-users connected to the high end package are experiencing an even better situation with 95 channels at ≤ 29.12 as opposed to 85 channels for ≤ 53.58 in a year and half ago. With all digital packages Melita is also bundling 61 digital radio channels as opposed to 50 in December 2006. The increased number of channels added to the price decrease indicates that Melita is pushing its digital service over its analogue services. These changes are also a result of increased competition from the digital terrestrial operator GO.

On the digital terrestrial service, GO increased the number of channels on all packages but has also increased marginally the price of the middle and high end packages. Although the prices of GO are much cheaper than those of the digital cable service, this is offset by a smaller number of channels.

The number of channels that GO can offer is also heavily restricted by spectrum limitations. With eight frequencies available and considering that on each frequency GO



can transmit seven program channels, it is clear that GO is almost running at full capacity. This is in stark contrast with the availability of the whole spectrum range on the cable network. Nevertheless, with the analogue cable service still running, Melita is also using its full capacity for transmission on both the digital and analogue networks.

The MCA considers that these price reductions, improvements in channel line up, and increased price-quality ratio are a good sign of increased competition amongst networks. The introduction of bundles by both network operators featuring their television packages is also another sign of increased competition and cost savings for end-users. Melita is offering four triple-play bundles featuring a broadband, television and fixed telephony connection, and another two bundles featuring a television and fixed line connection¹⁶. All of these packages provide savings to end-users as opposed to buying the services individually. GO is also offering a bundle of middle or high-end packages with its fixed line service, and end-users get up to three set-top boxes for free for two years¹⁷.

This offer by GO has also facilitated switching by end-users from the cable network to the digital terrestrial network. As already stated in the market definition section, the results of a consumer survey carried out in the first quarter of 2007 showed that out of those respondents that switched television connections, 27% switched from the cable analogue service to the digital terrestrial service. This percentage indicates a strong switching pattern from one network to another and has greatly contributed to push both network operators to improve their service offerings and reduce prices.

Given the current capacity constraints, and the significant improvements in service offerings of both the digital terrestrial and digital cable network operators, the MCA is of the opinion that at retail level there are encouraging signs of competition. In a short span of time the prices have been reduced significantly whilst the number of channels has been increased considerably. This has resulted in better price-quality ratio for the end-user. Although, at present, capacity constraints seem to pose a limit to how much more channels can be offered, the MCA believes that operators will continue to compete for customers with better prices and improved content.

3.2.3 Level of competition – Wholesale level

A competitive situation at wholesale level would result in broadcasters gaining access to one or more broadcasting networks so that they can deliver broadcast content. In a competitive environment this access is granted on the basis of commercial negotiations without the need for regulatory intervention. This scenario guarantees that network operators are delivering quality content to their customers whilst increasing revenues from new subscriptions, and that broadcasters reach more customers thereby increasing their revenues from advertising.

At present there are eight local broadcasters being transmitted on one or more networks. The following table summarises the platforms over which the local broadcasters are currently being transmitted.

¹⁶ Full details of bundled packages - <u>http://www.melitacable.com/landing.aspx?id=17</u>

¹⁷ Full details of offer - <u>http://www.go.com.mt/Default.aspx?ID=1089</u>



	Analogue Cable	Digital Cable	Digital Terrestrial
PBS*	Х	Х	Х
One TV*	Х	Х	Х
Net TV*	Х	Х	Х
Smash TV*	Х	Х	Х
Education 22*	Х	Х	Х
ITV Shopping Channel	Х	Х	
Family TV	Х	Х	
UTV			Х

* Must carry obligations

Over the past two years a number of new broadcasters have managed to negotiate access to the cable and/or digital terrestrial networks on commercial terms. The first shopping channel in Malta, ITV shopping channel, is carried on all the packages of the analogue and digital cable network. Similarly Family TV has very recently negotiated access with the cable network operator and is being carried on all packages of analogue and digital cable network.

One broadcaster started commercial negotiations with the cable network operators but following failed negotiations it managed to secure access on the digital terrestrial network. This case shows that commercial negotiations between network operators and broadcasters at wholesale level are ensuring access to broadcasters.

The other local broadcasters are being carried on all networks and enjoy 'must carry' status. Education 22 is an educational channel which is run by the Broadcasting Authority and has to be transmitted on all networks as established at law.

Based on the evidence above it is clear that all network operators are amenable to negotiate and grant access to broadcasters offering quality content. This has been the case with a number of local commercial channels. On the other hand, broadcasters have so far managed to negotiate access on commercially reasonable terms without the need for regulatory intervention.

Countervailing Buyer Power

Melita and GO bundle a mix of local and foreign broadcast content within their packages. These include a mix of premium channels together with a good number of free-to-air channels which are than retransmitted over their networks.

Network operators can only exert market power if they do not face any countervailing power from broadcasters seeking access to their networks. In turn broadcasters will have countervailing buyer power depending on the quality and popularity of their content such that network operators would not be able to exert any pressure on these broadcasters.

Five local broadcasters are not in a position to exert countervailing buyer power on network operators since these have must carry obligations. Under must carry rules these broadcasters are to be carried on all broadcasting networks. Consequently, neither the broadcasters nor the network operators can exert any market power over each other. Other local broadcasters are too small to exert any countervailing buyer power, however evidence so far shows that despite being small operators these have managed to negotiate reasonable conditions for access. This shows that countervailing buyer power has not been exerted by either of the parties involved.

With respect to foreign broadcasters the situation is very different since both Melita and



GO have to acquire rights to broadcast content of foreign broadcasters. The higher the quality and popularity of the content, the higher the fee for acquiring the broadcast rights will be. Furthermore, given that the Maltese market is very small in terms of subscribers compared to other countries, acquiring broadcast rights becomes more expensive for the two network operators. Consequently, it is reasonable to assume that Melita and GO are not able to exert any countervailing buyer power on foreign broadcasters.

3.2.4 Sufficiency of Ex post regulation

The MCA considers that the main competition problem that may arise in this market is related to the provision of access to broadcasting networks. From the analysis above it transpires that the evidence so far shows that both network operators are amenable to provide access to broadcasters. This has been achieved on a commercial basis and without any intervention from the MCA. Furthermore, in one particular case a broadcaster that started to negotiate with one network operator decided to switch to another network operator suggesting that the market itself is capable to address any problems related to access.

Consequently, the MCA believes that ex post regulation is sufficient to address any potential competition problems that may arise in this market. Furthermore, any issues related to content do not fall under the remit of the MCA and are to be dealt with by the Broadcasting Authority. This further limits the scope of any ex ante regulation.

3.2.5 Conclusion

The analysis above shows that despite high barriers to entry, the current level of competition in the market has resulted in lower prices and a better price-quality ratio for retail customers. At wholesale level, broadcasters have so far been granted access to one or more networks based on commercial agreements. Furthermore, there is no evidence that shows that any of the local broadcasters or network operators can exert countervailing buyer power on each other. This limits the probability of network operators engaging in uncompetitive practices in the market.

Consequently, the MCA believes that there is no evidence that would point towards the need to impose ex ante regulation in the wholesale market for television and radio broadcasting transmission services over the digital terrestrial and cable networks. Any potential problems that may arise in the market can be addressed by means of competition law alone.

03.3 Wholesale radio broadcasting transmission services over D-TAB networks

3.3.1 High Barriers to Entry

As stated earlier in this document, in July 2006 a network licence was issued to Digi B Networks Ltd. to operate the DAB network. This licence was updated in January 2008¹⁸ which is also the start of 18 month rollout period. The network operator is using the latest standard for DAB audio transmission which is the DAB+. This standard allows for a higher compression ratio and therefore more radio channels can be transmitted over a single frequency.

¹⁸ <u>http://www.mca.org.mt/infocentre/openarticle.asp?id=1152&pref=12</u>



Network roll-out is at an advanced stage and trial transmissions have commenced on 1st July 2008, whilst commercial transmissions started in October 2008¹⁹. The test transmission have started with the rebroadcasting of 36 foreign radio channels, simulcasting of 11 national radio channels and 1 community radio channel, and also broadcasting of a new radio station.

In terms of barriers to entry the MCA considers that unless additional spectrum is available there is no opportunity for new market entry. The availability of spectrum is not likely to happen within the near future and therefore there are high barriers to entry in this market.

3.3.2 Level of Competition

As the DAB+ network operator has only started test transmission it is very difficult to assess its impact on competition. With one network operator in the market it follows that this operator would enjoy a monopoly position. Nevertheless, the accessibility for end-user to DAB+ audio is still negligible. End-users are not able to listen to any radio station broadcasted over the DAB network with the existing analogue radio receivers. Therefore until a large number of end-users upgrade to a new digital receiver to capture DAB+ transmissions the impact that this new technology will have in the market is likely to be limited.

As an added limitation to the propagation of DAB+ is the limited availability of end-user equipment capable of receiving DAB+ signals. As a counter measure, the DAB+ operator has recently started to offer DAB+ radio receivers at a subsidized rate. Nevertheless, the MCA believes unless DAB+ becomes the standard for the industry producing digital radio receivers (for example in car stereos) it is unlikely that this equipment will be available to many in Malta with the timeframe of this review.

Due to these considerations the MCA expects that at retail level, over the two year timeframe of this review, the take-up of DAB+ is likely to be low. The primary reason for this is the slow pace at which the transition from the traditional analogue terrestrial radio to DAB+ is likely to happen.

The take-up of DAB+ at retail level also determines whether radio broadcasters will consider being carried over the DAB+ network. So far 11 out of the 13 national FM channels are being simulcast over the DAB+ network. Agreements between the radio broadcasters and the network operator have been reached on commercial terms. This practice is likely to continue in the future as with the DAB+ standard the network operator can accommodate a large number of broadcasters easily.

The MCA believes that DAB+ is an emerging technology and is still in its infancy in Malta. The current channel line-up for the test transmission provides sufficient evidence to conclude that local radio broadcasters would not find it difficult to gain access to the DAB+ network. Furthermore, it is in the interest of the DAB+ network operator to acquire more broadcast content so that it can encourage more end-users to purchase a DAB+ receiver.

3.3.3 Sufficiency of Ex post regulation

The MCA believes that at this early stage of DAB+ deployment there is no scope for any

¹⁹ <u>http://www.ba-malta.org/prdetails?id=130</u>



ex ante regulation in this market as it is highly unlikely that any competition problem can arise within the timeframe of this review. The MCA believes that should any problem at this stage arise this would be mainly addressed through ex post competition law. Any issues related to broadcast content are to be addressed by the Broadcasting Authority.

3.3.4 Conclusion

The MCA concludes that DAB+ is an emerging technology and that it is too early to impose any ex ante regulation. The large number of national FM radio channels already present on the DAB+ network indicates that the network operator is willing to grant access to broadcasters. The MCA will continue to monitor the development of this market and revise its decision should there be the need of any regulatory intervention.

03.4 Conclusions on the three criteria test

Following the analysis of the retail and wholesale market conditions carried above, the MCA has concluded that the following wholesale markets in Malta exist:

- 1. Wholesale television and radio broadcasting transmission services over digital terrestrial, digital cable and analogue cable networks; and
- 2. Wholesale radio broadcasting transmission services over D-TAB networks.

For these two markets the MCA has carried out an assessment of the three criteria test, to which it resulted that none of these markets pass cumulatively the three criteria. Consequently, as required by the framework, the MCA cannot impose any regulatory obligations in these markets.



Chapter 04 Regulatory Obligations

04.1 Introduction

In accordance with Regulation 10(4) of the ECNSR, where an operator is designated as having significant market power on a relevant market, either individually or jointly with others the MCA is obliged to impose on such operator appropriate regulatory obligations, referred to in subregulation (2) of Regulation 10 of the ECNSR, or to maintain or amend such obligations where they already exist.

However, in accordance with Article 9(2) of the ECRA, where the MCA concludes that a finding of dominance cannot be ascertained, the MCA is not allowed to impose or maintain any specific ex ante regulatory obligations.

In the case where no SMP designation is made and where regulatory obligations already exist in the market, the MCA, in accordance with Regulation 10(3) of the ECNSR, is to withdraw such obligations placed on undertakings subject to an appropriate period of notice to be given to all parties affected by such a withdrawal of obligations.

04.2 Existing obligations

Under the previous regulatory framework, the wholesale broadcasting transmission services market currently under analysis, was defined by legislation as the market for Cable Television and Radio Services market²⁰. In accordance with its powers under this former framework, the MCA had identified Melita plc. as having a Dominant Market Position in this market.²¹

Consequently, Melita was subject to a number of obligations detailed in the Legal Notice 399.24 Cable Systems (General) Regulations. Amongst other obligations, Melita has to ensure adequate quality of service targets in the provision of retail and wholesale services, the publication of tariffs, the provision of access, the use of cost oriented tariffs, and the application of transparency and non-discriminatory practices. No other operator has since then been determined as having a dominant position in that market.

04.3 Withdrawal of regulation

The MCA has carried out a detailed analysis of the market conditions in the various wholesale broadcasting transmission services markets identified in Chapter 2 of this document.

The main conclusion of this analysis is that none of the identified broadcasting markets pass cumulatively the three criteria test. As a result, none of these markets is susceptible for ex ante regulation.

Given this conclusion and under the provisions of Article 9(2) of the ECRA, the MCA has no legal power to impose new regulations, and/or maintain any of the existing regulations in this market.

²⁰ <u>http://www.mca.org.mt/infocentre/openarticle.asp?id=974&pref=39</u>

²¹ See MCA publication "<u>Dominant Market Position in the Telecommunications Market: An update of the DMP register – 2002</u>", August 2003

Consequently the MCA is to withdraw all existing regulations as established under the MCA decision entitled "Dominant Market Positions in the Telecommunications market" published August 2003 in relation to the market for Cable Television and Radio Services. The withdrawal of obligations shall become effective on the date of publication of the final decision of this market review, and this without prejudice to any other general obligations of undertakings at law.

04.4 Monitoring and reviewing of the market

The MCA considers that given the dynamic nature of electronic communications markets and the fact that all existing regulation is being withdrawn, it is vital to keep a very close watch on the progress of this market.

To this end the MCA intends to monitor market trends and developments on an ongoing basis, and remains committed to issue a new market analysis at any point in time in response to any deterioration in the competitive level of the market.



Appendix 1 - Channel list

GO Plus Channel Line Up

FREE +

100 M+ channel/Promo Channel 101 TVM 102 Net 103 One TV 104 Education 22 105 UTV 106 Smash TV 201 Rai 1 202 Rai 2 203 Rai 3 204 Italia 1 205 Canale 5 206 Rete 4 207 La 7 208 Sat2000 303 World Fashion Channel 902 Euronews 903 CNN

SILVER +

100 M+ channel/Promo Channel 101 TVM 102 Net 103 One TV 104 Education 22 105 UTV 106 Smash TV 201 Rai 1 202 Rai 2 203 Rai 3 204 Italia 1 205 Canale 5 206 Rete 4 207 La 7 208 Sat2000 301 BBC Prime 302 Living TV 303 World Fashion Channel 304 E! Entertainment 400 Disney Channel 401 Boomerang 402 Cartoon Network 403 Nickelodeon 404 Baby TV 501 Discovery Channel 502 Discovery Science 503 Discovery Travel & Living 504 Discovery World 505 National Geographic 601 MTV 602 VH1 701 Turner Classic Movies 702 MGM Movie Channel 801 Eurosport 802 Eurosport 2 901 BBC World 902 Euronews 903 CNN 904 CNBC

GOLD +

100 M+ channel/Promo Channel 101 TVM 102 Net 103 One TV 104 Education 22 105 UTV 106 Smash TV 201 Rai 1 202 Rai 2 203 Rai 3 204 Italia 1 205 Canale 5 206 Rete 4 207 La 7 208 Sat2000 301 BBC Prime 302 Living TV 303 World Fashion Channel 304 E! Entertainment 305 Trouble 306 Comedy 307 Wine TV 400 Disney Channel 401 Boomerang 402 Cartoon Network 403 Nickelodeon 404 Baby TV 405 Cartoonito 501 Discovery Channel 502 Discovery Science 503 Discovery Travel & Living 504 Discovery World 505 National Geographic 506 Biography Channel 507 History Channel 508 Nat Geo Wild 601 MTV 602 VH1 603 Trace TV 701 Turner Classic Movies 702 MGM Movie Channel 801 Eurosport 802 Eurosport 2 803 ESPN Classics 804 Sailing Channel 805 Motors TV 901 BBC World 902 Euronews 903 CNN 904 CNBC 905 Sky News 906 Bloomberg



Melita Channel Line up

Melita Active

100 Promotion Channel 200 Extreme Sports 300 TVS Monder 450 Decoreyr Channel 101 TVM 202 Funcsport 300 TVS Interscontal 300 TVS Interscontal 300 TVS Interscontal 100 FVM 202 Funcsport 300 TVS Interscontal 300 Decorey Channel 450 Texestont 100 FVM 202 Fibre Chashe 300 FVM 500 Decorey Channel 500 Decorey Channel 100 FVM 202 Fibre Chashe 300 FVM 500 Decorey Channel 500 Decorey Channel 100 FVM VM Reverk 252 One Colum 300 FVM 500 Decorey Channel 500 Decorey Channel 100 Formity TV Network 252 One Colum 300 FVM 500 Decorey Channel 500 Decorey Channel 100 Formity TV Network 252 One Colum 300 FVM 500 Decorey Channel 500 Decorey Channel 153 Edi Lor 253 Fallo 00 Drever Channel 500 Decorey Channel 500 Decorey Channel 153 Edi Lor 200 Exterme Sports 300 TVS Monde 450 Decorey Channel 550 MTV 153 Edi Lor 200 Exterme Sports 300 TVS Monde 450 Decorey Channel 550 MTV 101 TVM 202 Extran	Melita Active				
100 Promotion Channel 101 TVM 102 NET TV 103 One TV 201 Eurosport 2 203 ESPN Classic 1 204 ESPN Classic 1 205 Classe 2 Peter Peter 1 205 Saling Channel 205 Saling Channel 208 Motors TV 208 Proker Channel 208 Proker Channel 251 TV Moda 252 Zone Club 252 Zone Club 252 Sone Reality 255 ESPN Classe 2 Peter 2 255 MGM Channel 255 SM CM Channel 256 CM CM 256 CM CM 256 SM CM Channel 256 CM CM 256 SM CM Channel 256 CM CM 257 SM CM Channel 256 SM CM Channel 256 CM CM 256 SM CM Channel 256 SM CM Channel 256 CM CM 256 SM CM Channel 256 SM CM Channel 256 CM CM 257 SM CM Channel 257 SM CM Channel 257 SM CM Channel 258 SM CM CM 260 Parale 24 In French 260 Parale 24 In French 260 Sm CM CM CM 260 Sm CM CM CM 260 Sm CM CM CM 260 Sm CM CM CM CM CM 260 SM CM CM CM CM CM CM 260 SM CM CM CM CM CM CM CM CM 260 SM CM CM CM CM CM C	101 TVM 102 NET TV 103 One TV 104 E22 105 Smash TV 106 Weather & Info Channel 107 ITV Shopping 109 Family TV Network 150 Rai Uno 151 Rai Due 152 Rai Tre 153 Rete 4 154 Canale 5 155 Italia 1 156 La 7	201 Eurosport 202 Eurosport 203 ESPN Classic 1 204 ESPN Classic 2 209 Poker Channel 251 TV Moda 252 Zone Club 253 Zone Reality 254 BBC Prime 255 MGM Channel 263 Fashion TV 264 F MEN	 301 TVE Internacional 302 Deutsche Welle 303 RTL II 304 MBC 305 Al Jazeera 350 EWTN 351 Sat 2000 400 BBC World News 401 Euronews 402 ENN International 404 Bloomberg 405 CNBC 406 Arab News Network 407 France 24 in English 	454 National Geographic Channel 458 Travel Channel 500 Disney Channel 501 Nickelodeon 508 bebe tv 509 Jetix 550 MTV	
101 VM 201 Eurosport 301 TVE Internacional 451 Biscovery World 551 MTV Two 103 DNE TV 203 ESPN Classic 1 303 RTL II 452 Discovery Vorld 553 MTV Dance 104 E22 204 ESPN Classic 2 303 RTL II 453 Discovery Vorld 553 MTV Dance 105 Smash TV 205 Salling Channel 305 Al Jazera 455 National GeoWild 555 TRACE 109 Family TV Network 206 Chasse e Peche 305 EWTN 455 Travel Channel 555 MTACE 109 Family TV Network 209 Noter Channel 400 BC World News 400 BC World News 400 BC World News 500 Disney Channel 750 Roma Channel 153 Rei Ino 253 Zone Reality 403 EC World News 500 Zartoonito 753 Inter Channel 753 Inter Channel 155 Rai Te 253 Sone Channel 404 Bloomberg 500 Zartoonito 753 Inter Channel 753 Inter Channel 155 Rai Te 253 Granca UKTV 255 TGM Channel 406 Arab News Network 500 Zartoonito 753 Real Madrid TV 155 La 7 256 TCM 257 TCM 2 257 TCM 2 750 Roma Channel 750 Roma Channel 155 La 7 <td>Melita Connect</td> <td></td> <td></td> <td></td> <td></td>	Melita Connect				
100 Promotion Channel 101 TVM251 TV Moda 252 Zone Club400 BBC World News 401 Euronews500 Disney Channel 501 Nickelodeon750 Roma Channel 751 Milan Channel102 NET TV253 Zone Reality402 CNN International502 Cartoon Network752 Inter Channel103 One TV254 BBC Prime403 Sky News503 Cartoonito753 Juventus Channel104 E22255 MGM Channel404 Bloomberg504 Cartoon Network Too754 Chelsea TV105 Smash TV256 TCM405 CNBC505 Boomerang755 Real Madrid TV106 Weather & Info Channel257 TCM 2406 Arab News Network506 Boomerang +1107 ITV Shopping258 EI Entertainment407 France 24 in French508 bebe tv701 Melita Sports 1109 Family TV Network259 Granada UKTV408 France 24 in French508 bebe tv702 Melita Sports 2260 Hallmark Channel450 Discovery Channel500 Intro704 Melita Sports 3152 Rai Uno261 Paramount Comedy450 Discovery Science551 MTV Two706 Melita Sports 5152 Rai Tre263 Fashion TV452 Discovery Science551 MTV Two706 Melita Sports 6153 Rete 4264 F MEN453 Discovery Travel & Living552 MTV Music708 Melita Sports 7154 Chales 5265 The Style Network456 The History Channel555 TRACE801 Melita Movies 1156 La 7300 TV5 Monde457 The History Channel555 TRACE801 Melita Movies 1200 Extreme Sports301 TVE Internacional458 Travel Channel557 VH1 Classic201 Eu	101 TVM 102 NET TV 103 One TV 104 E22 105 Smash TV 106 Weather & Info Channel 107 TIV Shopping 109 Family TV Network 150 Rai Uno 151 Rai Due 152 Rai Tre 153 Rete 4 154 Canale 5 155 Italia 1	201 Eurosport 202 Eurosport 203 ESPN Classic 1 204 ESPN Classic 2 205 Sailing Channel 206 Chasse et Peche 207 NASN 208 Motors TV 209 Poker Channel 251 TV Moda 252 Zone Club 253 Zone Reality 254 BBC Prime 255 MGM Channel 255 MGM Channel 256 TCM 257 TCM 2 258 EI: Entertainment 259 Granada UKTV 260 Hallmark Channel 251 TVI 261 Paramount Comedy 262 LIVING 263 Fashion TV 264 F MEN 265 The Style Network	 301 TVE Internacional 302 Deutsche Welle 303 RTL II 304 MBC 305 Al Jazeera 350 EWTN 351 Sat 2000 400 BBC World News 401 Euronews 402 CNN International 403 Sky News 404 Bloomberg 405 CNBC 406 Arab News Network 407 France 24 in English 	451 Discovery World 452 Discovery Science 453 Discovery Travel & Living 454 National Geographic Channel 455 Nat Geo Wild 456 The History Channel 457 The History Channel 459 The Biography Channel 459 The Biography Channel 460 Animal Planet 500 Disney Channel 501 Nickelodeon 502 Cartoon Network 503 Cartoon Network 503 Cartoon Network Too 504 Cartoon Network Too 505 Boomerang 506 Boomerang +1 507 Trouble 508 bebe tv	551 MTV Two 552 MTV Hits 553 MTV Dance 554 MTV Music 555 TRACE 556 VH1 557 VH1 Classic 558 Mezzo 750 Roma Channel 751 Milan Channel 752 Inter Channel 753 Juventus Channel 754 Chelsea TV
101 TVM 252 Zone Club 401 Euronews 501 Nickelodeon 751 Milan Channel 102 NET TV 253 Zone Reality 402 CNN International 502 Cartoon Network 752 Inter Channel 103 One TV 254 BBC Prime 403 Sky News 503 Cartoon Network 753 Jurents Channel 104 E22 255 MGM Channel 404 Bloomberg 504 Cartoon Network Too 754 Chelsea TV 105 Smash TV 256 TCM 405 CNBC 505 Boomerang 755 Real Madrid TV 106 Weather & Info Channel 257 TCM 2 406 Arab News Network 506 Boomerang +1 701 Melita Sports 1 107 ITV Shopping 258 El Entertainment 407 France 24 in English 507 Trouble 701 Melita Sports 2 109 Family TV Network 259 Granada UKTV 408 France 24 in French 508 bebe tv 702 Melita Sports 3 150 Rai Uno 261 Paramount Comedy 450 Discovery Channel 500 MTV 705 Melita Sports 3 151 Rai Due 263 Fashion TV 452 Discovery Science 551 MTV Two 706 Melita Sports 6 153 Rete 4 264 F MEN 453 Discovery Travel & Living 552 MTV Hits 707 Melita Sports 8	Melita World				
	101 TVM 102 NET TV 103 One TV 104 E22 105 Smash TV 106 Weather & Info Channel 107 ITV Shopping 109 Family TV Network 150 Rai Uno 151 Rai Due 152 Rai Tre 153 Rete 4 154 Canale 5 155 Italia 1 156 La 7 200 Extreme Sports 201 Eurosport 202 Eurosport 2	252 Zone Club 253 Zone Reality 254 BBC Prime 255 MGM Channel 256 TCM 257 TCM 2 258 El Entertainment 259 Granada UKTV 260 Hallmark Channel 261 Paramount Comedy 262 LIVING 263 Fashion TV 264 F MEN 265 The Style Network 266 Wine TV 300 TV5 Monde 301 TVE Internacional 302 Deutsche Welle 303 RTL II	 401 Euronews 402 CNN International 403 SKy News 404 Bloomberg 405 CNBC 406 Arab News Network 407 France 24 in English 408 France 24 in French 450 Discovery Channel 451 Discovery World 452 Discovery World 452 Discovery Travel & Living 454 National Geographic Channel 455 The History Channel 456 The History Channel 458 Travel Channel 459 The Biography Channel 	S01 Nickelodeon S02 Cartoon Network S03 Cartoon Network Too S04 Cartoon Network Too S05 Boomerang S06 Boomerang +1 S07 Trouble S08 bebe tv S09 Jetix S50 MTV S51 MTV Two S52 MTV Hits S53 MTV Dance S54 MTV Music S55 TRACE S56 VH1 S57 VH1 Classic	 751 Milan Channel 752 Juter Channel 753 Juventus Channel 754 Chelsea TV 755 Real Madrid TV 701 Melita Sports 1 702 Melita Sports 3 704 Melita Sports 4 705 Melita Sports 5 706 Melita Sports 7 708 Melita Sports 8 801 Melita Movies 1



Radio Listing

600 Classical Greats 601 Classical Orchestral 602 Classical Calm 603 Strictly 60's 604 Country 605 New Age 606 Total Hits Nordic 607 Total Hits France 608 Chansons 609 The Alternative (Germany) 610 Schlager 611 Total Hits Germany 612 Total Hits Italy 613 Total Hits UK 614 Bollywood Hits 615 Turk Muzigi 616 Total Hits Netherlands 617 Cool Jazz 618 Jazz Classics 619 Bass Breaks Beats

620 World Carnival 621 Killer 80's 622 Total Hits Spain 623 Rock'n'Roll Era 624 Revival (60's & 70's) 625 Cocktail Lounge 626 Classic Rock 627 Harder Than Hell 628 The Alternative (UK) 629 Dance Floor Fillers 630 Chillout 631 Freedom 632 All Day Party 633 Silk (Love Songs) 634 Rewind (80's & 90's) 635 Blues 636 Classic R'n'B & Soul 637 Ultimate Urban 638 Reggae 639 Hip Hop

640 Magnificent 70's 641 Nothing But 90's 642 Arabic 643 Perfect Dinner Party 644 Biggest Rock Anthems Ever 645 20 Years of Indie Classics 646 One Station Under a Groove 647 Kids 650 BBC World Services 651 Capital Radio 652 89.7 Bay 653 Super One Radio 654 Radiu Malta 655 XFM 100.2 656 Radio 101 657 Calypso Ten-18 658 RTK 659 Smash Radio 660 Radju Marija 661 Campus FM 662 Magic FM



Appendix 2 – Licensed Nationwide Radio Stations

- 1. Radju Malta
- 2. Radju Parlament 106.6
- 3. Magic Radio
- 4. Super One Radio
- 5. Radio 101
- 6. Bay Radio
- 7. Calypso Radio
- 8. RTK
- 9. Smash Radio
- 10. Radju Marija
- 11. Campus FM
- 12. Capital Radio
- 13. XFM



Appendix 3 – Licensed Local Radio Stations

,			Valid	Erog	Power					2007	,				1	2008	2
Lic. No	Station	Duration	From	MHz	Watts		Mav	Jun	Jul			Oct	Nov	Dec			
	Radiu Prekursur	2 years		99.3	0.5	X	X	X	X	X	X	X	X	X	X	X	X
185/254	Radju Lehen il-Qala	2 years	17-Feb-07	106.3	0.35	Х	χ	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
186/255	Radju Sokkors	2 years	1-Mar-07	95.1	0.5	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
	Energy FM Radio	2 years	24-Mar-07	96.4	0.5	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
	Radju Xeb-er-ras	2 years	25-Jul-07	90.8	1	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
195/275	BKR Radio 94.5FM	2 years	1-Aug-07	94.5	0.5	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
200/279		2 years	25-Jun-07	92.2	0.5	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
205/281	3		31-Aug-07	107.1	0.5	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
	Fantasy Radio	2 years	8-Nov-07	104.1	0.5	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
	Power FM	2 years	22-Nov-07	90.4	0.5	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
	Radio Galaxy	2 years	14-Dec-07	105	0.5	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
	Bastjanizi FM	2 years	23-Nov-07	95	0.5	Х	χ	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
	Radju Hal Tarxien	2 years	20-Dec-07	99.0	0.5	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
	Radju Vilhena	2 years	14-Jan-08	96.1/ 106	0.5	Х	Х	Х	х	х	х	Х	х	Х	Х	Х	Х
221/301	Radju Hompesch	2 years	19-Mar-08	90	0.5	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
197	Radju Valentine Balzan	2 years	8-Jul-05	99.2	3	Х	Х	Х	Х								
213	Three Cities Radio	2 years	6-Nov-05	0.4	0.5	Х	Х	Х	Х	Х	Х	Х	Х				
232	Christian Light Radio	2 years	17-Jun-06	105.4	0.5	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
233	Lehen il-Belt Victoria	2 years	25-Jun-06	104.0	0.5	Х	χ	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
237	Radju Kottoner	2 years	29-Jul-06	98.0	0.5	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
245	Radju Sacro Cuor	2 years	15-Nov-06		0.5	Х	X	X	Х	X	X	Х	Х	X	Х	X	X
246	Radju Luminaria	2 years	14-Dec-06		0.5	Х	Х	Х	Х	Х	Х	Χ	Х	Х	Х	Х	Х
248	Eden FM Radio	2 years	17-Nov-06		0.5	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
249	Deejays Radio 956FM	2 years	23-Nov-06	95.6	0.5	Х	χ	Х	Х	Х	X	Х	X	Χ	Х	Х	Х
250	Radju Katidral	2 years	1-Dec-06	90.9	0.5	X	X	X	Х	Х	X	Χ	X	X	Х	X	X
251	Radju Bambina	2 years	13-Dec-06		0.5	Х	Х	Х	Х	Х	Х	Х	Х	X	Х	Х	X
280	Kiss FM	2 years	8-Oct-07	89.3	0.5							Х	Х	Х	Х	Х	Х
303	Radju Vizitazzjoni	1 month	2-Mar-08	92.4	0.5												Х
257	Radju Banda San Filep		11-May-07		0.5		Х										<u> </u>
259	Radju Sacro Cuor Sliema	14 days	18-Jun-07	94.0	0.5			Х									\vdash
260	Radju Lehen il-Guzeppini	1 month	6-May-07	90.6	0.5		Х										\vdash
283	Radju Lehen il-Guzeppini	1month	6-Dec-07	90.6	0.5									Χ			
261	Radju Pawlin	29 days	3-Jun-07	97.2	0.5			Х									L
262	12th May Radio	1 month	12-May-07		1.0		X	v									<u> </u>
263	Radju Gilju Rebbieh	1 month	9-Jun-07	105.5	0.5			X									└──
264	Lehen il-Karmelitani	1 month	23-Jun-07	101.4	1			Х						v			<u> </u>
284	Lehen il-Karmelitani	23 days	1-Dec-07	101.4	1				v					Х			—
265	Radju 15 ť Awissu	24 days	23-Jul-07	98.3	0.5			v	Х								<u> </u>
267 268	Radju Sant'Andrija	7 days	25-Jun-07	88.4	0.5			Х		v							—
	Radju Assunta Padiu Margarita	19 days	30-Jul-07	98.9					v	Х							├──
269 270	Radju Margerita Radju Vizitazzjoni	30 days	1-Jul-07 8-Jul-07	96.1 92.4	0.5				X X								├──
270	Radju Vizitazzjoni Radju Vizitazzjoni	1 month 1 month	9-Dec-07	92.4	0.5				~					Х			<u> </u>
294	Radju Vizitazzjoni Radju Santa Venera	9 davs	21-Jul-07	92.4	0.5				x					~			\vdash
271	Radju Santa Venera Radju Marija Bambina		16-Aug-07	90.2	0.5				~	х							<u> </u>
272	Radju Lauretana		4-Aug-07		0.5				-	x							<u> </u>
302	Radju Lauretana		2-Mar-08		0.5					~							X
287	Radju Lauretana		8-Dec-07		0.5									Х			^
274	Radju Bartilmew		17-Aug-07							х							<u> </u>
286	Radju Bartilmew	1 month		103.3	0.5					~				Х			<u> </u>
	2007 District Convention of Jehovah's Witnesses	3 days	7-Sep-07		0.25						х						
298	2008 District Convention of Jehovah's Witnesses	2 days	12-Jan-08	108	0.24										х		
277	Radju Santa Katarina	15 davs	19-Aug-07	90.6	0.5					Х							
2//											х						
277 278	Radiu Leonardo	10 davs	(-Sep-0/	109.2													
278	Radju Leonardo Radju Marija Assunta		7-Sep-07 1-Dec-07								~			Х			
278 285	Radju Marija Assunta	1 month	1-Dec-07	98.9	0.5									X X			
278		1 month 1 month		98.9 95.4	0.5									X X X			