



MuxCo Northeast Wales and West Cheshire Ltd

**An application to Ofcom for the
Northeast Wales and West Cheshire
Local digital radio multiplex**

May 2007

Executive summary

Please provide a summary of your application, of no more than four pages in length.

The strategy behind a new local multiplex business

1. MuxCo was formed to address the concerns of many radio operators that, to date, DAB digital radio has been established under a model that is cost prohibitive. As such, there has not been the incentive to contract for long term, high cost digital carriage, despite the 'bonus' of an automatic analogue licence renewal. This is particularly true for smaller radio businesses. Indeed, many have questioned whether there is a digital future for smaller radio services, and if so, whether it requires alternative technologies to DAB.

MuxCo proposes a different business model for the new local DAB multiplexes – a co-operative model that involves as many radio groups and like minded organisations as possible who wish to establish a broadcast future. By working with these companies, as shareholders and service providers, MuxCo is able to help them secure a stake in the digital future and to take a direct ownership position in the development of DAB, which, until now, has been dominated by the larger radio groups. MuxCo also enables shareholder service providers to make the move to digital in a time scale which they choose, rather than one which is forced upon them, without concerns that if they do not act now, they may miss the boat.

The overarching principle of MuxCo is to maximise the success of local multiplex businesses with whom it will partner, by ensuring certain key criteria are met:

- Helping to deliver a strong consortium of partners and a complement of service providers
- Providing the local partners with access to a credible management team with a proven track record
- Preparing well researched and supported licence applications
- Delivering a sound transmission solution that maximises population coverage from an early date

MuxCo Northeast Wales and West Cheshire Ltd

2. The applicant company is MuxCo Northeast Wales and West Cheshire Ltd (which for ease of reference in the application is referred to as 'MuxCo W&C'). The shareholders in this company are:

- Dee 106.3 Ltd 25%
- UTV Radio (GB) Ltd 25%
- Town & Country Broadcasting Ltd 25%
- MuxCo Ltd 25%

The Proposed Services

3. The focus of our proposals is 'local, local, local'. We are aware that other multiplex operators have tended to offer a range of existing analogue services (mainly their own) and then to provide a number of new digital only services, which generally form part of quasi-national networks and have little (if any) relevance to the local area.

The overlap of the Liverpool and North West England multiplexes, as well as the three national multiplexes that will be operating by the time that this multiplex launches, will result in the availability of a large number of big branded but nationally focused services. We have balanced this understanding with our specially commissioned research for the area. For example, whilst modern rock scored well in our research, we elected not to propose a station dedicated to this music type since XFM and Kerrang are already licenced to cover over 75% of our broadcast area. Notably, the availability of these services to listeners in our area will increase further when EMAP's expand their coverage of the area with a transmitter at Moel – Y - Parc.

We believe that local radio has a strong commercial future – there will always be demand for locally focused services providing local news and information, as well as satisfying local advertiser interests. We therefore believe that it is important for multiplexes to provide opportunities for a wide range of local services, both existing and new digital only, and for local radio operators to have the opportunity to provide these in an efficient and economical way.

MuxCo W&C will provide spectrum to accommodate the following local analogue services in stereo from launch:

- Marcher Sound
- Classic Gold Marcher
- 107.6 Juice FM
- Dee 106.3
- BBC Wales
- BBC Cymru

And will provide spectrum for 3 new exclusive digital services that will further broaden consumer choice:

- Easy Radio
- Wales Live
- JACK fm

In addition, we have allocated capacity for the provision of DLS and EPG at launch, as well as for the development of innovative data services.

The Winning Criteria

4. We believe that MuxCo W&C is in a unique position to introduce and support DAB digital radio across Northeast Wales and West Cheshire for the following reasons:

The extent of the coverage area proposed to be achieved by the applicant

5. Our transmission plan will deliver outdoor coverage of 96.1% within the PPA, and indoor coverage of 95.6% from launch. The plan has been designed to serve the maximum population within a realistic and sustainable business plan.

The timetables proposed by the applicant for achieving the stated coverage (i.e. transmission roll-out) and for the commencement of broadcasting of the services proposed

6. It is our intention to launch with 3 transmitters in August 2008, broadcasting 9 services. The launch of MuxCo W&C will be close to that of the second national commercial multiplex. As a result, the launch marketing activity of that multiplex will generate a considerable level of public interest in digital radio within this area. We believe that we will be able to capitalise from some of this promotional activity, and that this will complement our local marketing activities.

The ability of the applicant to establish the proposed service and to maintain it throughout the licence period

7. MuxCo W&C is a company with a solid shareholder base representing a mix of local established broadcasters, ambitious and developing media companies with interests in other areas and companies with substantial digital radio experience. The shareholders are committed to investing significant resource to underpin the business plan. The integrated relationship that the shareholders will have with the multiplex, in relation to the provision of audio and data services, provides further financial comfort (for both sides), and helps to demonstrate our ability to establish and maintain the proposed selection of services throughout the licence period. Through the multiplex management team and our transmission providers, we have unparalleled knowledge and experience in the establishment and operation of local multiplexes. Our business planning assumptions, in relation to revenue potential and costs, are robust and we believe that we have adopted a prudent approach to multiplex planning, one that supports and rewards all radio operators, strengthening DAB digital radio's ongoing position.

The extent to which the digital sound programme services (other than BBC services) proposed to be included in the service would cater for local tastes and interests, general or particular

8. We will provide capacity for all four local commercial licensees to broadcast in stereo, and will launch 3 digital services that will be new to the area. Carriage of existing services helps promote digital radio and drive listeners from analogue to digital. New digital services help broaden choice and provide further incentives for consumers to buy a DAB digital radio. Our proposed new services will significantly broaden choice; in particular 'Wales Live which brings a commercial speech-rich service to this area and strong competition for the BBC. This service, as well as being a source of information, will provide opportunities for local residents to air their views and comments. Given that 3 of the 10 highest rated formats in our research are already available on existing multiplexes and therefore audible across more than 75% of MuxCo W&C's PPA, we have reduced potential duplication by not including these formats in our proposals. Even still, collectively our proposed digital services appeal to 69% of the adult population, a figure substantially higher than the current net ILR reach of 47%.

The extent to which any such digital sound programme services would broaden the range of programmes available in the area by way of local digital sound programme services, and the extent to which they would cater for tastes and interests different from those already catered for by local digital sound programme services provided for that area or locality

9. The area is significantly (more than 75%) overlapped by the Liverpool and North West England regional multiplexes. As such, a percentage of local listening will remain with services on these multiplexes. However, this is the only multiplex focussed on Northeast Wales & West Cheshire, and since all of our proposed services are unique to our multiplex and our area, i.e. they are not carried on any existing local multiplexes, they will, individually and collectively, broaden choice.

The extent to which there is local demand or support for the proposed service

10. Our specially commissioned consumer research has highlighted strong interest in the services that we propose carrying. Our task will be to promote the brands in order to stimulate both digital uptake and trial of our services.

Whether, in contracting or offering to contract with persons providing digital sound programme services or digital additional services, the applicant has acted in a manner calculated to ensure fair and effective competition in the provision of such services

11. We have established fair and transparent policies for negotiations with potential programme and additional service providers, and maintain full records of any contacts and discussions which take place, in whatever form, prior to, during and after the application process.

Summary

12. We believe that MuxCo W&C is a very credible operator for the Northeast Wales and West Cheshire multiplex.
- The consortium has analysed the market fully with specially commissioned digital research, alongside the more traditional RAJAR analysis, discovering the services that will truly appeal to W&C's tastes and interests.
 - The consortium is committed to ensuring that local digital radio is a success in this area.
 - Members of the consortium have an unparalleled track record in applying for and operating multiplexes.
 - Members of the consortium have an impressive track record in operating local stations across the area, many of which are market leaders in their localities. This management expertise will be invaluable to the multiplex, as well as assisting the development of new programming streams to encourage the broadening of choice.
 - The multiplex is well resourced, in terms of both management and finances.

General information

1. Name of Applicant, Address, Telephone and Fax Nos., E-mail address

This must be a single legal entity: either a body corporate or a named individual person. If the former, a copy of the certificate of incorporation must be included with the application.

MuxCo Northeast Wales and West Cheshire Ltd

Registered Number 06205388
Address: 96a Curtain Road, London EC2A 3AA
Telephone (daytime): 020 7739 7879
E-mail address: info@muxco.com

2. Main Contact (For Public Purposes)

Please nominate at least one individual to deal with any press or public enquiries, stating:

Name: Gregory Watson
Telephone (daytime): 07917 413700
Address: 96a Curtain Road, London EC2A 3AA
E-mail address: gregory@muxco.com

3. Main Contact (For Ofcom Purposes)

Please nominate one individual to whom questions of clarification and/or amplification should be sent.

As above.

Section 51(2) (a) and (b): Extent of proposed coverage area and timetable for coverage roll-out

4. Summary of coverage proposals

Provide a summary, fully consistent with the more detailed information about transmission sites supplied separately (see Q.6 below), of the coverage areas proposed to be achieved by the applicant's technical plan, and an estimate of the adult (aged 15+) population which will be served by this local radio multiplex service. For the avoidance of doubt, Ofcom's assessment of coverage, and the concomitant roll-out obligations applied in the licence, will be based solely on the transmission data supplied in response to Q.6 of the application.

13. The transmission proposal is designed to provide good overall coverage across the licensed area, including all urban areas and motorways. Careful consideration has been given to the design requirement to maximise received field strength within the licensed area in the built up areas, while meeting national and international co-ordination limits.

The total adult population within the PPA is 672,843.

MuxCo proposes to launch with three transmitters, which will provide:

- Outdoor population coverage of **646,652** adults (aged 15+), which equates to coverage of **96.1%** of the population within the PPA.
- Indoor population coverage of **643,758** adults, which equates to coverage of **95.6%** of the population within the PPA.

As a result of our chosen transmitter configuration, MuxCo W&C will cover a wider area than the PPA, including coverage into Liverpool. As a result, we calculate that the total adult population covered by the multiplex will be 1.05m.

Standalone Coverage

14. The following table shows the coverage within the PPA of each individual site, demonstrating the considerable overlap between transmitters which will ensure a reliable signal to a significant proportion of the licensed area, even should one transmitter be on reduced power or have failed.

Transmitter Site	Standalone Coverage: Indoor	Percentage Licence Area	Standalone Coverage: Outdoor	Percentage Licence Area
Moel – Y – Parc	390,882	58.1%	403,540	60.0%
Wrexham Rhos	248,308	36.9%	271,026	40.3%
St John's Beacon	365,822	54.4%	404,114	60.1%

Cumulative Coverage

15. The table below shows how the overall PPA coverage is achieved up through the use of a network of transmitters.

Transmitter Site	Cumulative Coverage: Indoor	Percentage Licence Area	Cumulative Coverage: Outdoor	Percentage Licence Area
Moel – Y – Parc	390,882	58.1%	403,540	60.0%
Wrexham Rhos	500,767	74.4%	510,222	75.8%
St John's Beacon	643,758	95.6%	646,652	96.1%

Network Resilience

16. The following table shows the impact from the loss of one transmitter at a time, demonstrating its contribution to the overall network.

Transmitter Site	Cumulative Coverage Loss: Indoor	Percentage Licence Area	Cumulative Coverage Loss: Outdoor	Percentage Licence Area
Moel – Y – Parc	64,828	9.6%	52,613	7.8%
Wrexham Rhos	97,082	14.4%	94,194	14.0%
St John's Beacon	142,992	21.3%	136,431	20.3%

5. Timetable for coverage roll-out

Outline the timetable in accordance with which the coverage proposed at Q.4 would be achieved, and the technical means by which it would be achieved. This should also be fully consistent with the more detailed information provided confidentially in response to Q.6.

17. We believe that the earliest launch of our multiplex service brings the greatest possible advantage to the development of the digital radio audience in the multiplex area. We therefore propose to launch in August 2008, with coverage of 96.1%.

We have made contingent arrangements with transmission provider National Grid Wireless (NGW) to ensure that this launch date can be achieved. In making our assertion on timing, we have assumed that the multiplex award would be by 31 August 2007.

Transmitter Site	Roll Out Date
Moel – Y – Parc	Launch
Wrexham Rhos	Launch
St John's Beacon	Launch

We have identified one additional site for potential network enhancement in the future, at Llangollen. At present this transmitter is not planned and no date is proposed when this enhancement might prove feasible within the business plan. However, we wish to reserve the right to consult with Ofcom during the licence term to examine this and other opportunities to increase population coverage in an economically viable manner.

Antenna Systems and Combiner

18. NGW will be the owner of two of the required antenna systems. NGW has received offers for the major requirements at the remaining site where antenna systems are controlled by Arqiva. Discussions on the combiner supply have taken place between NGW and Arqiva Network Access, and we are advised that no obstacles are expected in meeting the timetable.

Transmitter systems

19. NGW propose to use transmitters from Rohde & Schwarz (R&S) with whom they have a Frame Agreement. R&S has confirmed their ability to provide the necessary transmitter systems and installation services within the required timescales.

Distribution

20. The distribution between the multiplex centre and the transmitters will be maintained on a Self Provide Network ('SPN') using a Ring topography, ensuring that no one single fault on the distribution will cause a loss of service. The distribution ring will contain both a mixture of existing and new NGW maintained RF SHF links. NGW has confirmed that it is able to install the new and upgraded links, and the existing sections of the SPN Ring within the timescale of the transmission roll-out.

Accommodation and Power Requirements

21. NGW Network Access has confirmed that it can provide suitable accommodation and power supply at two of the sites and of the remaining site, NGW Network Access has negotiated new or modified accommodation and power supply agreements.

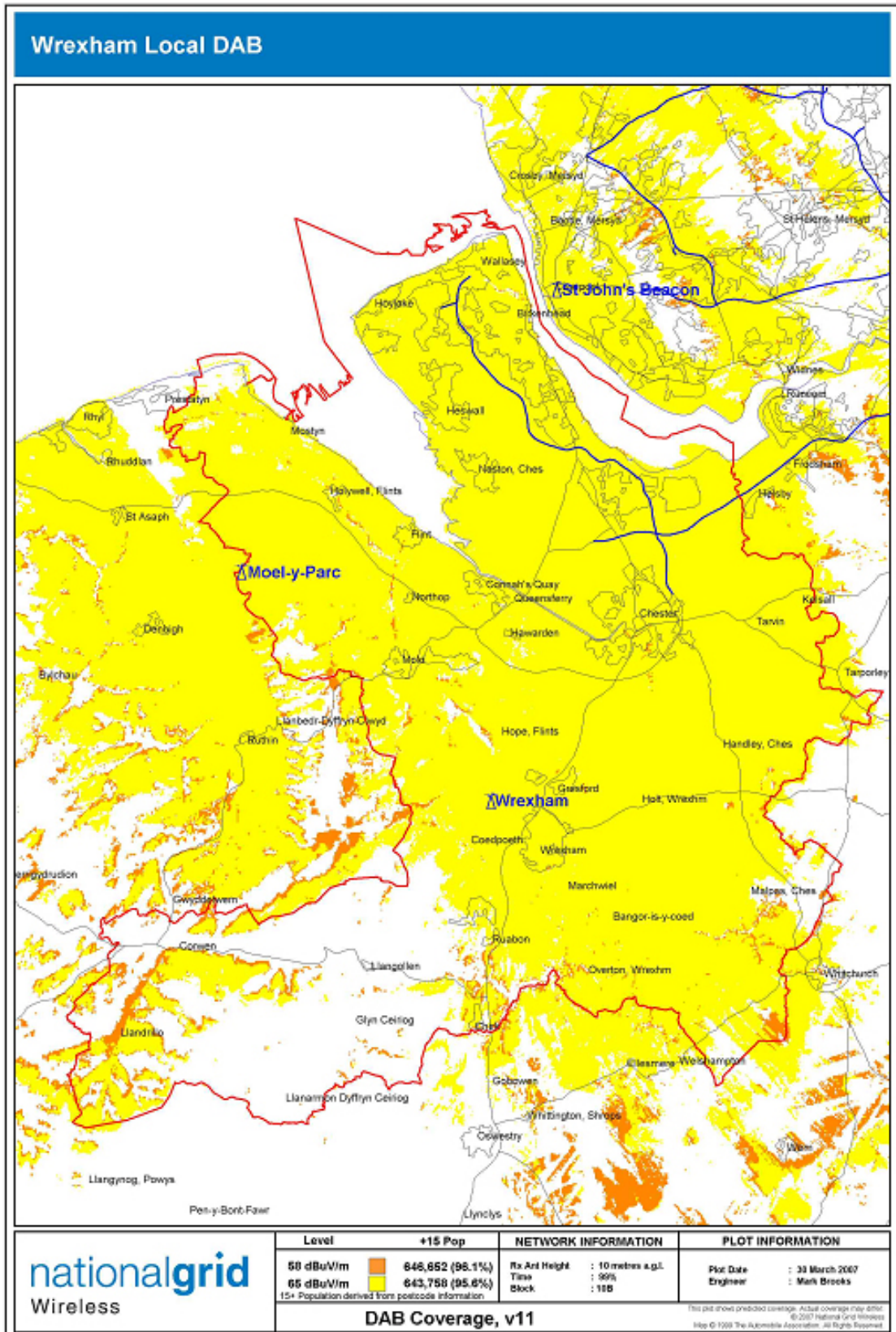
6. Detailed coverage proposals

Provide, in an electronic text file, details of the technical plan, which should consist of the following components: assignment details, implementation table, and implementation data.

- a) The first part of the technical plan is an electronic file of assignment details. This gives the relevant technical detail of each transmitting station which the applicant is undertaking to provide as part of its network. It will be used to enable Ofcom to estimate the coverage which will be achieved by the applicant, on a basis consistent with other applicants. It will also enable confirmation of the plan's compliance with Ofcom's various technical requirements. If more than one Technical Plan is proposed, a separate file should be submitted for each one. Each file of assignment details must be submitted in the data format specified at <http://www.ofcom.org.uk/radio/ifi/rbl/dcr/>. All files must be supplied in flat text format. This is the data format in which all transmitter co-ordination requests to Ofcom have been supplied to date, and is based upon ASCII97 defined by the European Radiocommunications Office – the Wiesbaden 1995 Plan management body.
22. The assignment details accompany this application are provided under separate cover as an electronic text file.

- b) A separate table, the implementation table, should also be provided for the technical plan. This should list, for each proposed transmitter, the date of implementation promised with the parameters promised in the transmission plan, the owner/lessor of aperture space on the mast/tower, and any relevant accompanying notes. If it is proposed to introduce a transmitter with different parameters (typically lesser power or height) for an interim period, then on both lists there should be one entry for the initial assignment, and a second entry for the one which replaces it, with a note stating which transmission assignment is replaced.

Site Name	NGR	Date of Implementation	Owner/lessor of aperture space on mast/tower	Antenna height (metres)	Notes
Moel – Y – Parc	SJ 1233 7014	Launch	Arqiva	189	NGW will use the existing digital radio antenna and NGW Network Access will provide a combiner at this site. This antenna will be shared by other DAB services.
Wrexham Rhos	SJ 3010 5370	Launch	Arqiva	34	NGW Network Access has an offer from Arqiva to provide a new antenna at this site.
St John's Beacon	SJ 3489 9027	Launch	Land Securites	127	NGW Network Access had a meeting with the Landlord and has negotiated permission for NGW to provide a new antenna at this site.



- c) Each transmission assignment should also be represented by site implementation data, specific to each transmission site (only one set of data for each site should be submitted). This detail is intended to elicit the practicability of the technical plan. For each site name (corresponding to assignment details and implementation table):
- i) If existing aerials are to be used, this needs to be stated and an explicit reference made. If not, then applicants should provide a sketch diagram (or set of diagrams), approximately to scale, of the portion of the supporting structure on which the radiating aerials are to be mounted. Show the radiating aerials, and the aerials of other services mounted immediately above, below, and at the same level as, the radiating aerials of the applicant's service.
 - ii) Provide details of the building at the site in which the transmission equipment is to be housed.
 - iii) Provide confirmation from each of the relevant parties that they have seen and agreed the applicant's proposals (to the extent that this includes new works) in respect of:
 - aerial mounting on the supporting structure, as proposed in the sketch diagram;
 - running of feeder cable from transmission system to aerial(s);
 - sharing of aerials and insertion/use of combiners, where relevant;
 - siting of transmission equipment;
 - supply of power;
 - building works (if any).

The relevant party in each case, namely whoever controls the infrastructure (mast, cableways, building, power), should be named explicitly.
 - iv) State whether and if so how the transmission arrangements are expected to change due to the TV digital switchover programme.

Note: submission of this information does not imply that Ofcom will validate the design of the aerial system. The licensee will be required to adhere as far as is reasonably practicable to the antenna pattern proposed in the assignment details, and in all cases to limit the maximum radiated power in any given direction as may be required by Ofcom.

Site Implementation Data - Diagrams

23. Drawings of each of the new proposed antenna at the transmitter sites are shown below in this document. All existing antennas are not shown as details are already known.

Wrexham Rhos



St John's Beacon



Additional views from the top of St John's Beacon



ii, iii & iv) Transmitter Accommodation Antenna Systems, Power, and Building Works

24. NGW has confirmed that the designs of the existing antennas and feeder systems are suitable for use at the powers indicated in the Assignment Details, and that the sites can be made available for the proposed transmitter systems. Electrical power is available. Minor building works are required in a small number of cases and NGW has confirmed that it will undertake these.

Site Name	Antenna System	Antenna Height (m)	Antenna Owner Permission	Accommodation Permission	Power Supply	Impacted By DSO
Moel – Y – Parc	Existing National Antenna, VHF/ DAB shared Band II/III panels	189	Arqiva Network Access	NGW Network Access are providing accommodation in the existing NGW Area	To be provided by NGW Network Access	See Note 1
Wrexham Rhos	VHF/ DAB Band III 2 Dipoles on pole	34	Arqiva Network Access	NGW Network Access are providing accommodation in the existing NGW Area	To be provided by NGW Network Access	See Note 1
St John's Beacon	VHF/ DAB Band III 2 Yagi's on pole	127	NGW Network Access	NGW Network Access are providing accommodation in the other users Area	To be provided by NGW Network Access	None (No UHF)

Note

The DSO (Digital Switch Over) planning programme is ongoing with Antenna Design Proposals being formally agreed by all television broadcasters and Managed Transmission Suppliers. These are being systematically defined and issued in accordance with the DSO planning programme. Whilst the precise impact of DSO cannot be determined at present at these sites, NGW have assured us that they will endeavour to minimise the impact on both the rollout and operation of the new DAB multiplex.

d) Provide the following details regarding transmission arrangements:

- i) Any transmission contracts that have been agreed
- ii) The status of these agreements

25. Transmission Contracts - In the event of winning the licence, NGW will undertake the provisions for transmission and multiplexing.

Status - Initial agreements exist with NGW to put the proposed contracts in place.

7. Other technical proposals

- a) Supply a network diagram, with associated tables and labels as necessary, showing in terms of functionality and (in principle) location: the source of each proposed digital sound programme service, digital additional service or television licensable content service, the point(s) of multiplexing, the point(s) of control of the elements of the multiplex (both FIC and MSC) and the distribution circuits to the transmitters. State the nature of the bearer circuit in each case, and its possible provider.
- b) For each of the data services proposed in Q.11(d) and Q.12, show: the transport mechanism within the multiplex on which it would be carried; whether stream or packet mode; the average net data rate (including any protection or encryption bits additional to those provided for in the ETS 300 401 specification); the range of data rates which might apply in any one transmission frame in support of the service, both net and (specifically attributable to the service concerned) gross; the protection mechanisms applying to their effective transmission (with reference to the options available in the ETS 300 401 specification, quantified where the specification provides for different numerical values to afford protection); whether it should be regarded as an additional service, a television licensable content service or an ancillary service; whether encrypted or not, and the encryption system envisaged; the use to which the data service would be put, including a justification for the multiplex capacity required. Outline how compliance will be achieved with the requirement that no more than the statutory proportion of the total multiplex capacity will be devoted to non-programme related data services; the figure excludes Synchronisation, MCI and SI). See also Q.20, about audio services.
- c) With reference to the response to Q.20, supply a diagram showing the relationship between the following elements of the multiplex: services; service components; transport elements (MSC sub-channels: dedicated, and X-PAD; FIDC).
- d) List any of the services in the multiplex which it is proposed be susceptible to interruption by announcements common to more than one service. If announcements are to be made on a geographically-selective basis, describe how this is to be achieved within the provisions of the ETS 300 401 specification.
- e) Describe how it is anticipated that the features of the ETS 300 401 will be used, if at all, in consideration of continuity of a programme service, or the offering of an alternative service, to listeners who lose reception of the multiplex signal, particularly in vehicles.

The response to this question should be submitted in confidence.

26. Our response to this question is submitted in confidence in Part B.

Section 51(2)(b): Timetable for commencement of services

8. Commencement of services

If it is envisaged that any of the digital sound programme services or their related ancillary services will not begin broadcasting from the start of the radio multiplex licence period, provide details of which service(s) will not commence from the launch of the radio multiplex service, the reason(s) for this, and an indication of the expected timescale for the commencement of the service(s).

27. It is envisaged that the 4 commercial analogue services and 2 digital only services will begin broadcasting from the start of the radio multiplex licence period. Reflecting that Wales Live will be a new speech rich service, seeking to launch on a number of Welsh multiplexes at the same time, this service will launch within 9 months of the multiplex's commencement. In addition, we will provide the reserved capacity for the two BBC services.

Section 51(2)(c): Ability to establish and maintain proposed service

9. Ownership and control of company which will operate the licence

(a) Board of Directors

- i) Provide the name, occupation, other directorships, other media interests, background and relevant media experience of each director (executive and non executive), including the proposed chairperson.

28. Please see the following pages. It is proposed that the chair will rotate between the directors.

- ii) If there are firm plans to appoint any further directors, provide information (with details of any specific individuals in mind). This information may be submitted in confidence.

29. There are no plans to appoint any further directors.



Gregory Watson

Occupation:
Managing Director

Other directorships:
Reception Media Ltd, Folder Media Ltd, MuxCo Ltd, MuxCo Home Counties Ltd, Radio Academy, Radio Academy Trading Ltd, Children's Radio UK Ltd, Children's Radio UK (London) Ltd, The Digizone Ltd.

Other Media Interests:
None

Gregory graduated from the University of Exeter in 1986 with a degree in Accountancy studies, and commenced his career with KPMG Peat Marwick as a trainee accountant, where he qualified as a Chartered Accountant in 1990.

In 1991, he moved to the Radio Authority as Deputy Head of Finance. In this role his responsibilities were split between the management of the day-to-day financial operations of the Authority, the licensing and regulation of commercial radio and analysis of the radio and related media industries.

In 1998, Gregory joined GWR Group plc as Head of Special Projects, with responsibility for looking at all new analogue and digital opportunities. In this capacity, Gregory was involved in the submission by Digital One for the application to run the national digital radio multiplex, and played a significant role in the pre-operational period of that multiplex prior to its launch in November 1999. Gregory also oversaw the development of GWR's local multiplex network, NOWdigital, and of the consortia multiplex businesses of DRG London, South West Digital Radio and NOWdigital East Midlands.

In 2001, Gregory was promoted to Group Corporate Development Director; a role under which he oversaw GWR's strategic development in new media alongside the development of local and regional analogue and digital radio licences. Gregory played a central role in the merger of Capital Radio plc and GWR Group plc which led to the formation of GCap Media plc in May 2005.

Gregory has always been passionate about commercial radio broadening its horizons and developing new commercial opportunities. In 2005, Gregory orchestrated the establishment of Children's Radio UK Ltd as a joint venture between GWR Group, HIT Entertainment and Susan Stranks. The company launched FUN radio as the UK's first (and still only) radio station dedicated for pre and primary school children and their parents and carers.

In 2007, recognising that a significant proportion of the radio industry was being left behind by digital advancements, not because they were unable to take an active role but often were not encouraged to do so, Gregory left GCap Media to provide digital media advice to a number of independent radio and media companies.

Gregory is a Trustee of the Radio Academy, and is Chairman of Radio Academy Trading Ltd.

Jason Bryant

Occupation:
Chief Executive, Town and Country Broadcasting

Other directorships:
Haven FM (Pembrokeshire) Ltd, Dee 106.3 Ltd, Radio Carmarthenshire Ltd, Town and Country Broadcasting Ltd, JB Consolidated Ltd, Bridge FM Radio Ltd, Swansea Bay Radio Ltd, South Wales Radio Ltd, North Wales Broadcasting Ltd.

Other Media Interests:
None

Jason is a well-known and highly regarded radio entrepreneur with a rare mix of expertise across analogue and digital radio. He has a successful track record in launching and developing innovative and successful local commercial radio services, and has built Town and Country Broadcasting to become the leading Welsh-based media company, which is profitable and with an annual turnover nearing £3m. Jason is also a founding investor in Chester's Dee 106.3, which is also profitable and has achieved market leadership in an extremely competitive market.

Jason started his career at BBC Radio Solent where he worked across news and programmes, before moving to London's LBC as a producer and editor on a number of high-profile shows. He moved to television as a producer, working with Sir David Frost and GMTV, before returning to radio as a producer and editor at London's BBC GLR. In 1994, Jason moved to Scotland as the launch Programme Director for Scot FM, before heading back South to join Talk Radio, where he became Programme Director. He left the station in 1997 to work as a consultant with the management team at BBC Radio 5 Live.

Following Kelvin MacKenzie's acquisition of Talk Radio in 1998, Jason returned as Development Director, and subsequently Managing Director to re-launch the service as talkSPORT. He was subsequently appointed Managing Director of Development at talkSPORT's parent company TWG plc, where he oversaw a rapid growth in the company's activities, including several successful DAB multiplex licence applications in London and Scotland. Jason then joined SMG plc in February 2003 to lead its radio development projects and develop its DAB digital radio brands. Jason remains a consultant to Virgin Radio.

In 1999 Jason assembled the successful application team for the Pembrokeshire local radio licence and three years later repeated the success in Carmarthenshire. Notably, 102.5 Radio Pembrokeshire has one of the highest audience shares of any station in the UK, and Radio Carmarthenshire has recently been confirmed as the number one station in its area. Radio Pembrokeshire has won the prestigious Arqiva/CRCA Station of The Year award in 2005 and 2006, and Radio Pembrokeshire has also won a Silver Sony Radio Award as Station of The Year. In November 2005, Town and Country Broadcasting was awarded the new local licence for Swansea, which launched in November 2006, and last summer acquired the station for Bridgend, 106.3 Bridge FM, giving the group continuous coverage from the Pembrokeshire coast to Cardiff.

Ron Smith

Occupation:
Company Director

Other directorships:
Dee 106.3 FM Ltd, Charlton Group Ltd

Other Media Interests:
None

Ron is a well known and highly regarded businessman across both North Wales and Cheshire. He has a strong track record in, and commitment to, local radio, having been instrumental in Chester getting its own local radio station - Dee 106.3 in 2003. As a founding shareholder in Dee 106.3, Ron has helped drive the station to become the City's leading commercial radio station, with reach of 20% and a market share of 7.6%.

Ron has significant community and business connections in Chester and North Wales and is involved in a wide variety of business interests in the local economy and the broader region. He is Chairman of Charlton Group, a prominent regional house builder and also chairs a corporate travel management and conferencing company providing services both in the UK and internationally from their Chester base. Ron was formerly Chief Executive of Wain Homes plc with an annual turnover in excess of £100m, and former Chairman of HS Administrative Services Ltd, a Chester based pensions and financial services company.

Ron plays an active role in the local community and spends a great deal of time with local charities, including serving as Chairman of the Chester MacMillan Nurse Appeal, Director of the Hospice of the Good Shepherd Development Trust, Director of Chester in Concert and past Chairman and past President of Tarporley and District Round Table. He was also Vice-Chairman until 1997 of Manchester Camerata, a symphony orchestra based at The Bridgewater Hall in Manchester. Ron is President and former Chairman of the Chester Business Club and previously Chairman of Chester, North Wales and Ellesmere Port Chamber of Commerce and a Director of CEWTEC – the local training and enterprise council. He was Vice-President of HBF - the National Housebuilders Federation, and a Director of the Association of North West Housebuilders.

Scott Taunton

Occupation:
Managing Director, UTV Radio (GB) Limited

Other directorships:

102.4 Wish FM Ltd, Swansea Sound Ltd, 1458 Big AM Ltd, Switchdigital (London) Ltd, Switchdigital (Scotland) Ltd, Allied Radio Ltd, Talk 107 Edinburgh Ltd, Allied Radio Productions Ltd, Talk Radio UK Ltd, allTALK fm Ltd, talkSPORT Ltd, allTALK fm North East Ltd, The Digital Radio Group (London) Ltd, allTALK fm Solent Ltd, The Wireless Group (IRLS) Ltd, Bristol FM Ltd, The Wireless Group Holdings Ltd, Bocom International Ltd, The Wireless Radio Company Ltd, First Radio Sales Ltd, Torbay 106.8 FM Ltd, Forever Broadcasting Digital Radio Ltd, Tower 107.4FM Ltd, Forever Broadcasting Ltd, Tower FM Ltd, Galactichalo Ltd, Town Centre Properties (Subsidiary) Ltd, Grand Central Broadcasting Ltd, TWG Impact Ltd, Imagine FM Ltd, UTV-Emap Digital (B&H) Ltd, Independent Radio Group Ltd, UTV-Emap Digital Ltd, Leahurst Investments Ltd, TWG Payments Ltd, New City Radio Ltd, U105 Ltd, Newport FM Ltd, UTV plc, Newstalk 105.2 FM Ltd, UTV Internet Ltd, Off The Telly Productions Ltd, UTV Radio Ltd, Perfecttaste Ltd, UTV Radio (GB) Ltd, Pulse F.M. Ltd, Valley Radio Ltd, Forever Broadcasting Ltd, Wareselection Ltd, Radiowave (Blackpool) Ltd, Wave 102 FM Ltd, Signal Radio Ltd, Wire FM (1997) Ltd, Somethin' Else Sound Directions Ltd, Wolverhampton Area Radio Ltd, Soccerbet Ltd, Wyke FM Ltd,

Other Media Interests:
None

Scott, born in Australia, moved to Northern Ireland in 1995 and joined UTV in March 2000 when the group acquired DNA Internet where he was General Manager. He took on the role of Managing Director of UTV Internet and was responsible for introducing innovative broadband and telephony products, which saw UTV Internet become one of the largest service providers throughout Ireland.

In 2002, Scott took on the role of UTV Group Business Development Director, with specific responsibility for radio. UTV is one of the most successful radio groups in Ireland. Scott was responsible for the integration of Lite FM into the group in 2003 and its successful re-launch as Dublin's Q102. Scott is also responsible for overseeing the performance of Broadcast Media Sales, UTV's Irish radio sales house, and sits on the board of First Radio Sales, the UK's fourth largest commercial radio sales point. Scott also played a key part in UTV's successful application for U105 in Belfast, which was successfully launched in November last year.

In June 2005 Scott took on the role of Chief Executive Officer of The Wireless Group (now renamed UTV Radio) following the UTV acquisition. He has since turned around the fortunes of the group with GB radio revenues showing a 6% like-for-like improvement in the twelve months to 31st December 2006, compared to a 5% decline in the market. Scott was appointed to the UTV plc board in November 2005.

Deanna Hallett

Occupation:
Managing Director, Hallett Arendt

Directorships:
Hallett Arendt Ltd, Folder Media Ltd, MuxCo Ltd, MuxCo Home Counties Ltd

Other Media Interests:
Fellow of the Radio Academy, Full member of the Market Research Society, Radio Centre RAJAR Research Committee

Deanna Hallett has more than 35 years experience in marketing and research. Her career began in 1972 at NOP working on audience and programming research with the first wave of radio licence applicants.

She developed her radio research skills at Independent Radio Sales where she ran a mini RAB working with advertisers, agencies and client radio stations to improve the position of radio within the media and specifically with agencies to heighten their knowledge and understanding of planning, buying and researching radio. With IRS client radio stations she advised in all areas of programming research, sales product knowledge training and station marketing. She was appointed to the board as Marketing and Research Director in 1982.

Deanna set up Hallett Arendt in 1986 to work with radio stations in sales training, programming research and all aspects of station marketing having launched Essex FM as the first format driven station in the UK. Deanna was also involved in the first stage of cable franchise applications.

At NOP, she was instrumental in developing the now established radio diary research methodology and has sat on the industry research committee since its inauguration.

Today, Deanna is acknowledged as one of the top licence consultants in the country, with Hallett Arendt holding a record of unparalleled success, both in the UK and Ireland. They have worked as part of the winning teams for Classic FM - the first Independent National radio station - and Digital One - the first national digital radio multiplex operator. They also have successfully worked on a host of local and regional analogue licences as well as the new generation of digital services, again, both local and regional.

In 2003 Deanna set up a training programme, specifically with programmers in mind – 'The Programmers Development Plan', which has already been implemented across the EMAP group.

Moving forward, Deanna aims to bring all her expertise to MuxCo by offering training, research and marketing advice to all its service providers in order to maximise the audiences and revenue to the W&C multiplex.

(b) Proposed Investors and Shareholding Structure

Full details of the proposed shareholding structure should be provided, including:

iii) Names and addresses (the latter may be submitted in confidence) of all existing or proposed shareholders.

Shareholder	Shares	% Shareholding	% Loan stock
Dee 106.3 Ltd 2 Chantry Court Chester CH1 4QN	10,000	25%	25%
UTV Radio GB Ltd 18 Hatfields London SE1 8DJ	10,000	25%	25%
Town & Country Broadcasting Ltd Ashby House 64 High Street Walton On Thames KT12 1BW	10,000	25%	25%
MuxCo Ltd 96a Curtain Road London EC2A 3AA	10,000	25%	25%

iv) Total number, class/classes of shares and issue price of shares (specify voting, non-voting, preference, other etc.).

30. 40,000 £1 ordinary shares issued at par.

v) All voting shareholders and holders of 5% or more of non-voting shares and loan stock should be named. State the number, class/classes and price of shares to be issued to each investor.

31. See above.

vi) Outline any shareholders agreements or arrangements which exist.

32. A standard shareholders agreement will be established, with standard pre-emption and voting rights to all shareholders. The shareholders have agreed heads of terms which cover key issues of governance relating to the company including shareholdings, board composition, funding, pre-emption, exclusivity and confidentiality. This will be incorporated into a shareholders agreement in the event of a licence award.

vii) Where a corporate body other than a current Ofcom licensee will be providing 30% or more of the required funding, details should be given of its directors and main shareholders, and of its activities.

33. Further information on MuxCo Ltd is provided in Part B.

viii) Ofcom may request additional information (e.g. a banker's letter, statutory / management accounts) regarding the shareholders, or any other providers of finance, listed in the application.

34. We would be happy to provide any information as requested by Ofcom.

(c) Involvement of the Applicant in Specified Activities

Details are required of the involvement by the applicant and its participants (including shareholders or other subscribers of more than 5% of the applicant's total funding requirements) in any of the activities listed below, and the extent of the interest. For these purposes, the applicant includes associates of the applicant (i.e. directors and their associates and other group companies).

i) Advertising agencies

None

ii) Newspapers

None

iii) Other broadcasting interests

Dee 106.3 Ltd

Dee has interests in the following services – Dee 106.3.

Town and Country Broadcasting Ltd

T&C has interests in the following companies (all 100%) - Swansea Bay Radio Ltd, Haven FM (Pembrokeshire) Ltd, Radio Carmarthenshire Ltd, Bridge FM Radio Ltd.

Town and Country Broadcasting is 100% owned by Jason Bryant, who also holds a 27.17% personal investment in Dee 106.3 Ltd.

UTV Radio (GB) Ltd

UTV owns and operates the national commercial service talkSPORT, and nineteen local commercial radio stations under licences from Ofcom (all 100%) - Imagine FM, Juice FM, Peak 107 FM, The Pulse, Pulse Classic Gold, Signal 1, Signal Two, Swansea Sound, Tower FM, Valleys Radio, 96.4 FM The Wave, Radio Wave 96.5 FM, Wave 102 FM, 107.2 Wire FM, 102.4 Wish FM, 107.7 The Wolf, Talk 107 and U105. UTV Radio was also recently awarded the FM licence for Preston, Leyland and Chorley. In addition, UTV Radio (GB) has a 22.12% shareholding in Chester's Dee 106.3 Ltd.

A leading participant in the following digital multiplex operators - Switchdigital (Central Scotland), Switchdigital (Aberdeen), Switchdigital (London), The Digital Radio Group (London), UTV-EMAP Digital (Bradford & Huddersfield), UTV-Emap Digital (Swansea), UTV-Emap Digital (Stoke-on-Trent).

It also owns the ITV franchise for Northern Ireland (broadcast in Northern Ireland and Ireland). In the Republic of Ireland, UTV operates four commercial stations, under five licences from the Broadcasting Commission of Ireland. These are Cork 96 FM, 103 FM County Sound, Limerick's Live 95 FM, Dublin's Q102 FM and Louth and Meath's LM FM.

iv) Bodies whose objects are wholly or mainly of a religious nature

None

v) Bodies whose objects are wholly or mainly of a political nature

None

vi) Local authorities

None

vii) Other publicly-funded bodies

None

10. Financial and business plan

(a) Overall Financial Strategy

Explain how the applicant considers it is able to establish and maintain, throughout the licence period, its proposed service. This explanation should include an assessment of each of the following, but is not restricted to these factors:

- i) The network construction phase
- ii) The operational start-up phase
- iii) Marketing
- iv) Ongoing operation of the service

The Strategy Behind MuxCo W&C

35. The strategy for MuxCo W&C can be summarised as:

- To create an opportunity for local operators, who currently broadcast or propose to broadcast within the licence area, to participate in multiplex ownership, and by so doing provide them with a means to have greater control over their digital future.
- To establish an economical and efficient multiplex business which poses little additional burden, financial or managerial on these shareholders. This is achieved through working with well respected experts in digital radio management and transmission.
- To provide opportunities for all existing analogue broadcasters to switch to digital, either by providing simulcast or near simulcast services or creating new digital services.
- To provide a good return on investment to shareholders.
- To re-emphasise local radio as an important part of radio's future.

The Shareholders and their Digital Strategies

36. **Dee 106.3 Ltd** ('Dee') owns and operates the leading commercial radio service in Chester, Dee 106.3. The station launched in March 2003 and quickly established a strong audience following and significant market share.

Through their experience of DAB, Dee's shareholders and directors acknowledge that the future of radio is digital. They also recognise the importance of not simply being a service provider but a stakeholder in local DAB ownership, giving the business a greater degree of control over its destiny and sharing in the risks and rewards. Only MuxCo W&C offers the prospect of viably providing a stereo service and Dee is therefore pleased to be a 25% shareholder in MuxCo W&C and to commit to the stereo DAB simulcasting of Dee 106.3.

37. **UTV Radio GB Ltd** ('UTV') owns and operates Liverpool's Juice FM. UTV Radio GB Ltd is a subsidiary of UTV plc, which is listed on the London Stock Exchange with a market capitalisation of approximately £240 million. UTV plc reported a post-tax net cash inflow from operations of £25 million in its last financial year to 31 December 2006. UTV Radio is the fastest growing division of the eponymous, Ulster-based media company. Its UK arm was formed in June 2005 when UTV acquired The Wireless Group.

Radio is an increasingly important driver of UTV's performance, and the group's radio division is one of the leading commercial radio groups in the UK and Ireland. In the UK, the group owns the very successful national speech station, talkSPORT, plus 19 diverse and individual local radio stations across the UK including Talk 107 in Edinburgh, the first all speech local radio station to launch in the UK in more than thirty years. UTV are firm believers in the important role local commercial radio stations play within their communities and developing and growing the group's local commercial radio portfolio is a core part of the division's strategy. UTV are strong supporters of DAB digital radio, being involved in seven regional and local multiplexes, and is a shareholder in the 4 Digital Group application for the second national multiplex, for which they propose 'Talk Radio' – an all-speech news, views and entertainment service, characterised by opinionated presentation and lively debate, delivered in a humorous and entertaining way. UTV recognises the importance that DAB has for existing local services, and simulcasts its analogue services on relevant local multiplexes. UTV is therefore pleased to be a 25% shareholder in MuxCo W&C and to commit to the stereo DAB simulcasting of Juice FM.

38. **Town & Country Broadcasting Ltd ('T&C')** was established to build a local network of radio stations. It enjoys an excellent track record establishing and maintaining local radio licences and is committed to bring its creative, critical and commercial successes to digital radio. T&C aims to become the leading media group based in Wales. It has a strong commitment to local radio and whilst recognising the current difficulties that many local radio services face, has the confidence in the continuing value of localness. Jason Bryant has a strong track record in digital radio, having helped create the local digital radio businesses for The Wireless Group and developing SMG's digital brands. Jason recognises the importance of DAB for all stations, and the opportunities it can provide for companies such as T&C. In relation to digital, T&C's objective is to apply alongside MuxCo (and partners) for the new local multiplexes being advertised in and contiguous to Wales, and to develop new local digital services that are distinctive and viable. Outside radio, T&C's strategy is to develop local media businesses that complement their traditional broadcast operations, including online local information sites and magazines. Through its participation in DAB ownership, T&C is able to be more confident about the investment to launch Wales Live, a speech rich service across Wales.
39. **MuxCo Ltd** was established by Deanna Hallett and Gregory Watson to provide digital radio solutions to local radio companies. Its principle objectives are to help deliver efficient solutions to service providers on local multiplexes and economical benefits to their shareholders. MuxCo works with local partners to help encourage them to take a more active role in digital radio, from both a business point of view, as well as to the provision of services. After all, more local choice of the right type will ultimately help drive the take-up of DAB. MuxCo believes that there is a strong business model to be developed for truly local multiplexes - ones that provide a range of interesting services demanded by local residents. All too often, new digital radio choice has simply meant services that are nationally driven by the biggest groups; the re-broadcast of a quasi-national service into a local area, with no local marketing support or activity to build awareness or encourage trial. Introducing local broadcasters as shareholders provides greater incentives for these companies to invest in local digital radio programming and promotion. An added benefit to both the multiplex and the listener from the participation of such broadcasters is that, partly because of the limited resources they operate with, they are often at the more creative end of the radio spectrum. Further information on MuxCo and its shareholders is provided in Part B.

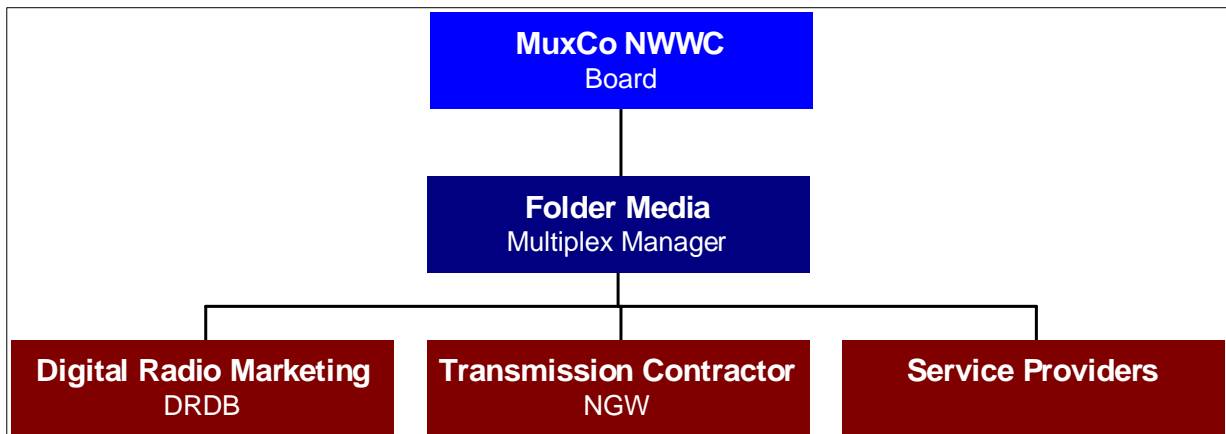
The Business and the Objectives

40. We have established a business model that will drive the company to provide a premium digital radio service. Four key objectives have been identified that will ensure that this goal is achieved:
- To operate a multiplex that offers a wide choice of programme services which addresses local tastes and interests, broadens choice and increases plurality of ownership
 - To promote and maximise take-up of digital radio receivers, by working with our analogue and digital service providers and through membership of the DRDB
 - To operate in a manner ensuring fair and effective competition
 - To operate a sound financial business which is intrinsically linked to providing popular formats

MuxCo W&C is committed to ensuring that digital radio is successfully established. We are well resourced technically as well as financially to support the needs of the service providers.

MuxCo Northeast Wales and West Cheshire Ltd

41. The chart summarises the reporting structure of the company.



42. The Board has responsibility for the company's business strategy; monitoring and reviewing trading performance; appointing and contracting with service providers; developing multiplex bandwidth policies; developing pricing structures; appointment and supervision of the Multiplex Manager and regulatory compliance. The Board will meet at least quarterly.

Folder Media Ltd

43. MuxCo W&C has appointed Folder Media to provide multiplex management services. Folder Media is a company that has unparalleled experience in the day-to-day management of successful local multiplexes. Further information on Folder Media is provided in Part B.

(i) The network construction phase

44. The network construction phase includes three stages – planning, building and testing. MuxCo W&C will contract with NGW to provide a transmission solution, and on the basis of this commitment, NGW will fund the capital expenditure and installation of the infrastructure.

NGW has provided strategic support during the planning stage of the application and will liaise with Ofcom on behalf of MuxCo W&C.

As an established and respected transmission service provider, NGW have considerable existing resource and infrastructure to support the multiplex and as such will provide 24 hour monitoring of the network. By using a secure remote control system, NGW will control multiplex re-configurations, something MuxCo W&C will have remote access to should the need arise to take direct control. Multiplex reconfiguration will be undertaken in line with our policies and contractual agreements with service providers.

(ii) The operational start-up phase

45. The operational start-up phase includes contracting with service providers, liaising with Ofcom over the build process, ensuring regulatory issues are followed, including the issuing of DSPS licences, and liaising with the DRDB and service providers on marketing activity.

As multiplex manager, Folder Media will be responsible to the Board for the launch of the multiplex and its subsequent day to day operation; in particular, overseeing bit rate variations, enhancements or projects required by service providers; overseeing the testing of audio and data services; working with service providers and the transmission subcontractor to maximise multiplex functionality and efficiency; monitoring and fault reporting, ensuring that the output of all service providers is correctly logged and compliant with legislation and codes and helping develop new revenue streams.

(iii) Marketing

46. We believe that despite DAB digital radio having been 'live' for 8 years, by the time MuxCo W&C launches, there will still be a considerable lack of public awareness of DAB that needs to be addressed. We recognise that as a sole body, our voice will be too small and inefficient. We will therefore seek to join the DRDB (or any successor) and will actively support industry-wide generic promotion of digital radio.

We will also work closely with our service providers to help co-ordinate locally focused marketing of digital radio generically, as well as of the services on the multiplex, with advice provided where relevant by Folder Media. In addition, service providers are likely to undertake their own brand marketing. We also wish to work with our service providers, particularly those that currently broadcast on analogue locally, to use airtime to promote DAB digital radio.

In order to fund membership of the DRDB, a contribution proportional to contracted capacity, will be levied at cost on service providers from the month following the launch of the multiplex.

We believe that for listeners, multiplex owner identity is of little or no importance (and is potentially confusing). We will work with the DRDB to use a national through-the-line identity and graphic style that makes both digital radio and station brands the 'heroes'.

(iv) Ongoing operation of the service

47. Folder Media will provide ongoing management cover for the multiplex, including purchase and sales ledgers, IT, secretarial, legal, marketing co-ordination and technical support.

Through the MuxCo web site we will promote digital radio generically and the services specifically. The main aim of the web site, as well as providing a conduit of information between MuxCo W&C and service providers, will be to help educate and inform listeners and advertisers, as well as equipment retailers.

(b) Funding

Detail the sources of finance that will be used to fund the licence, under the following headings:

Source of finance	£
Share capital	40,000
Loan stock	40,000
Leasing/HP facilities (capital value)	0
Bank overdraft	0
Grants and donations	0
Other	0
Total	£80,000

Applicants should provide evidence that sufficient funds are available to each investing shareholder to cover their proposed investments.

48. Letters on investment are provided in Part B.

Applicants should also provide a copy of the most recent unabbreviated accounts for each investing shareholder.

49. Recent accounts for the shareholders have been provided under separate cover. MuxCo Ltd is a new company and details of its shareholders and funding commitment is provided in Part B.

Where relevant, provide information on:

- i) Loan terms (e.g. interest rate, repayment terms, redemption/conversion terms);
- ii) Assets leased.

All of the funding identified above should be confirmed to the applicant. Explanation should be provided if this is not the case.

50. Loan stock will be issued interest free, as and when required. Loan stock will be repaid in a timely manner as permitted by the cash position of the company.

(c) Financial Projections

The purpose of this question is to allow the applicant to demonstrate its understanding of the market. The forecasts should be based on reasonable assumptions, which are logically applied and justifiable.

The applicant should confirm in writing to Ofcom that:

- a) The projections contained in the financial model have been properly and accurately compiled on the basis of the assumptions listed and explanatory notes accompanying the projections
- b) That the policies adopted follow generally accepted UK accounting standards
- c) Such accounting policies have been properly and consistently applied.

Ofcom may request independent confirmation of the above, in the form of a letter from a firm of authorised UK accountants, addressed to the board of directors of the applicant.

The applicant should provide financial projections for the pre-operational period and on an annual basis for the subsequent 12 year licence period. The projections must include:

- i) Profit and loss accounts
- ii) Balance sheets
- iii) Cash-flow forecasts
- iv) Appropriate supporting schedules

The forecasts should be supplied on an Excel spreadsheet or similar and guidance notes should be provided. The applicant must also complete and submit the spreadsheet entitled

“Financial Template for DAB Local Radio Multiplex Licence Applications” located at: <http://www.ofcom.org.uk/radio/ifi/rbl/dcr/> using information from its business model. Guidance notes for completion of the Template can be found in Annex 3 to this Notice. This section must include a full listing of the underlying assumptions on which the financial projections are based.

The application should detail how revenue figures were derived, distinguishing between:

- i) access fees
- ii) fees based on audience or revenue shares
- iii) other fees (please specify)

Revenue forecasts should also distinguish between digital sound programme services, digital additional services and television licensable content services.

The application should clearly set out the fee structure for each service provider, and explain the reasons for any differences in fees paid between providers.

The response to this question may be submitted in confidence.

51. Our response to this question is submitted in confidence in Part B.

(d) Audience Projections

Provide the following information:

i) The projected adult (aged 15+) population of the Total Survey Area (TSA) within which it is intended to measure the audience of the digital sound programme services to be broadcast on this local radio multiplex service

52. The adult population within the PPA is 673,000, which has been taken as the TSA for the purpose of the application.

The projected adult population for the full multiplex area (i.e. including coverage into Liverpool) is 1.05m.

ii) Projections for audience ratings (e.g. weekly reach, average weekly hours of listening) of the digital sound programme services to be broadcast on this local radio multiplex over at least the first four years of the service, with detailed demographic breakdowns as appropriate

53. The following table summarises our projections for audience ratings for the simulcast analogue services and digital only services. In relation to the analogue services, we have forecast their total hours across both analogue and digital platforms, and then highlight their digital hours generated through the multiplex.

	Year 1	Year 2	Year 3	Year 4
Marcher FM				
• Weekly Reach %	10.3%	10.2%	10.1%	10.0%
• Ave Hours	10.3	10.3	10.3	10.3
• Total Hours ('000)	714	707	700	693
• Digital Hours ('000)	83	112	125	138
Classic Gold Marcher				
• Weekly Reach %	3%	3.1%	3.3%	3.5%
• Ave Hours	11.1	11.1	11.1	11.1
• Total Hours ('000)	224	232	247	261
• Digital Hours ('000)	26	37	44	52
Dee 106.3				
• Weekly Reach %	5.2%	5.2%	5.25	5.2%
• Ave Hours	8.4	8.4	8.4	8.4
• Total Hours ('000)	294	294	294	294
• Digital Hours ('000)	34	47	53	58
107.6 Juice FM				
• Weekly Reach %	4.1%	4.2%	4.3%	4.4%
• Ave Hours	7.6	7.6	7.6	7.6
• Total Hours ('000)	210	215	220	225
• Digital Hours ('000)	24	34	39	45
Easy Radio				
• Weekly Reach %	1.6%	2.0%	2.4%	2.6%
• Ave Hours	4.0	4.5	5.0	5.5
• Total Hours ('000)	43	61	81	96
• Digital Hours ('000)	43	61	81	96
Wales Live				
• Weekly Reach %	1.6%	1.9%	2.3%	2.5%
• Ave Hours	5.0	5.6	6.0	6.6
• Total Hours ('000)	55	73	94	113
• Digital Hours ('000)	55	73	94	113
JACK fm				
• Weekly Reach %	2.0%	3.0%	3.2%	3.5%
• Ave Hours	5.0	5.3	5.5	6.0
• Total Hours ('000)	67	107	117	140
• Digital Hours ('000)	67	107	17	140

- iii) Projections for the total weekly number of listening hours anticipated for all digital sound programme services (national and local) both in absolute numbers, and as a proportion of all radio listening hours per week as recorded by RAJAR or equivalent audience measurement research, over at least the first four years of the service

	Year 1	Year 2	Year 3	Year 4
Population 15+ ('000)	673	673	673	673
All radio hours ('000)	14,256	14,149	14,066	14,066
All digital radio hours ('000) (national and local)	3,326	4,481	5,036	5,582
All digital hours as % of all radio hours	23.3%	31.7%	35.8%	39.7%
MuxCo W&C Multiplex hours ('000)	333	470	554	642
MuxCo W&C Multiplex hours as % of all radio hours	11.4%	11.4%	11.5%	11.7%

- iv) The basis on which the estimates above have been calculated, and any assumptions taken into account.

Audience projections for programme services

54. In estimating audiences, we have based our assumptions on RAJAR for the analogue services, looking at the performance of individual services across the wider W&C TSA, and on our consumer research findings with regard to the digital only services.

Projections for the total weekly number of listening hours

55. In order to calculate projections for the total weekly listening hours for all digital programme services (national and local) both in absolute numbers, and percentages, we looked at the following factors:

- Population
- Total radio listening
- Digital share of listening
- The relative market shares of:
 - BBC Network
 - BBC Local
 - INR
 - ILR listening to stations originating in the area
 - Out of area ILR
 - Other radio listening

Population

56. The adult population within the PPA is 673,000 adults (per NGW). This figure has been used for the purposes of the application and audience modelling.

We have also reviewed RAJAR data by combining the analogue TSAs of Marcher Sound, Wirral's Buzz 97.1 and Dee 106.3 FM, using rolled 12 month data over the past three years. This calculates an adult population of 683,000 for 2006, which is within 1.5% of the PPA generated TSA.

Total Radio Listening

57. The combined RAJAR analysis highlights that despite a small slide in 2005, the total number of radio listeners in this market has increased over the last three years, as has the total amount of time spent listening. However, the average time spent listening has declined marginally and may indicate that, along with other parts of the country, all radio listening in the area is at risk of decline. This is a function of intensive competition for the media hour from a host of new media opportunities from the intensification in choice of TV channels to media availability through online and mobile platforms.

Historical Average Hours Performance - Combined RAJAR TSA

	2004	2005	2006
Population	670,000	677,000	683,000
Reach %	87.4	86.5	89.0
Reach '000s	586	586	608
Total Hours '000s	14,185	14,174	14,545
Ave. Hours	24.2	24.2	23.9

58. Whilst we believe that increased radio choice will help stimulate the total market, we believe it prudent to forecast some decline both in the penetration of all radio and average time spent listening.

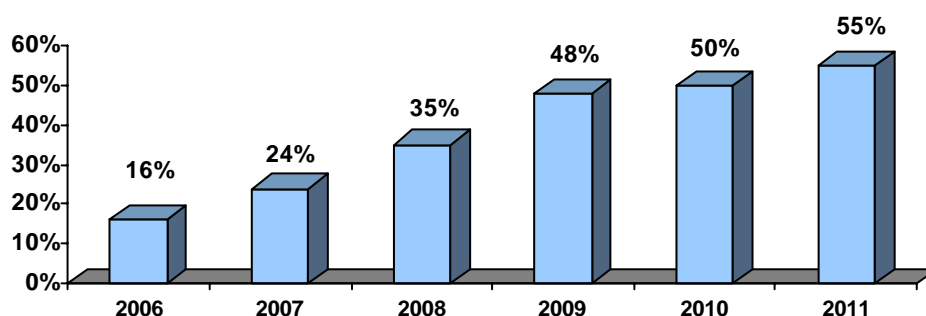
Projected Average Hours – PPA projected TSA

	Year 1	Year 2	Year 3
Population	673,000	673,000	673,000
Reach %	89.0	88.7	88.5
Reach '000s	599	597	596
Total Hours '000s	14,256	14,149	14,066
Ave. Hours	23.8	23.7	23.6

Digital Share of Listening

59. To establish the potential share of listening attributable to digital, we have reviewed the digital radio penetration forecasts published by the DRDB, as well as other pertinent data as to the current and future take up.

Our penetration growth forecasts are based on the DRDB's 5 year forecast (published September 2005), which we have up-weighted using the known 2006 penetration data, and then carried forward the forecast growth on the basis of this new base. By 2010, the updated DRDB forecasts show DAB household penetration to have increased to 50%. This is summarised in the following chart.



We are comfortable with the DRDB forecasts:

- The latest sales data from the DRDB is that by the end of December 2006, 4.4m DAB sets had been sold, with December sales representing 26% of the total radio market.
- 72% of the population are reported to be aware of DAB digital radio (source IPSO MORI Tracker Jan 07)
- Latest RAJAR data (Q4 2006) shows 7.9m adults live in homes with DAB radios, which equates to 16% penetration.

This suggests that the DRDB forecast is on target and possibly likely to be exceeded. Our consumer research suggests that penetration of DAB digital radio in this area is significantly higher than the UK average. However, for prudent planning purposes we have used the UK figures.

We also note Ofcom's research and forecast in the share of listening between platforms. In the 'Future of Radio' published in April 2007, Ofcom highlights that digital listening is currently 13.6% and is growing at around 8% a year, and forecasts that by 2008 a third of listening will be to digital, and that by 2010 this should be 50%.

We have also had access to the long-term digital listening modelling undertaken by NGW as part of their national multiplex application. In particular, we have used their forecasts for digital share of listening as the starting point for calculating digital listening within the W&C area.

The relative market shares of the radio sectors

60. We looked at the individual radio sectors of BBC Network, BBC Local, INR (i.e. services broadcast on national commercial multiplexes), ILR listening to stations originating in the area, out of area ILR and other radio listening.

We made an assessment as to how we believe each of these sectors will grow in terms of the numbers of services provided under each. We then evaluated on the basis of RAJAR data the relative shares between these sectors today in analogue radio, today in digital radio, 2008 in digital radio and 2012 in digital radio. This analysis enabled us to establish a view on the overall radio market within W&C and the changes that each sector would experience. The detailed workings behind these numbers are provided in Part B.

	Analogue Stations 2006	Relative share	Digital Stations 2006	Relative share	Digital Stations 2008	Relative share 2008	Relative share 2012
BBC Network	5	46.5%	6	55.3%	6	41.0%	37.3%
BBC Local	3	13.7%	0	0.0%	0	5.0%	5.0%
INRs	3	6.4%	5	14.8%	15	22.0%	25.8%
ILR W&C	5	11.8%	0	0.0%	3	10.0%	11.5%
Out of area ILR	4	16.3%	13	29.9%	13	22.0%	20.5%
Other	-	5.3%	-	0.0%	-	0.0%	0.0%
Total		100.0%		100.0%		100.0%	100.0%

Section 51(2)(d): Cater for local tastes and interests

11. Proposed digital sound programme services

61. MuxCo W&C's proposes to launch with 6 commercial audio channels, comprising four existing analogue services and two digital only services, along with BBC Wales and BBC Cymru. A 7th commercial (digital only) audio service launching within 9 months. All existing analogue services will broadcast in stereo; an important requirement highlighted by our research.

- Marcher Sound
- Classic Gold Marcher
- Juice FM
- Dee 106.3
- Easy Radio
- JACK fm
- Wales Live (within 9 months)
- BBC Wales
- BBC Cymru

We are uncertain as to the desire of GCap Media to simulcast its local FM relay service – Wirral's Buzz 97.1. We will discuss with GCap Media as to their aspirations for the provision of this service, which we have identified could be accommodated by using bit rate allocation and new codec technology (i.e. broadcasting stereo services at 112 kbits).

We have also discussed opportunities with prospective service providers (such as UCB) to accommodate other services, which again could be achieved through bit rate allocation.

Further information on these opportunities is provided in a confidential additional response to Q.19 contained within Part B.

MuxCo W&C considers that technical improvements in the area of audio compression and the development of next generation DAB receivers could provide further opportunities to add new services in the longer term to further enhance listener choice.

- a) Provide, for each digital sound programme service for which capacity is to be allocated, a description of the service. This should include a short-form (no more than four or five words) description of the type of service (i.e. its 'format'), and should also include a summary of the type(s) of music and speech to be provided, together with a quantification of the proportions of these within the programme mix. The number of hours each day that the service will be broadcast, and details of any content unique to this local area (with trigger-points for when such content will be included if not from the commencement of broadcasting, as appropriate), must also be included. These format descriptions will form part of the licence. Therefore, questions of clarification may be asked prior to licence award and the wording amended to reflect this, if necessary. Examples of format descriptions included within existing radio multiplex licences can be viewed at: <http://www.ofcom.org.uk/radio/ifi/rbl/dcr/>.

Marcher Sound / Wirral's Buzz 97.1

Format	Contemporary	
Licence Description	A simulcast of Marcher Sound; a contemporary chart music station for the Wrexham & Chester area, broadcasting predominantly current chart hits, new releases or hits up to 10 years old. Speech will feature news and information relevant to its target audience.	
Fuller Description	The majority of the music output is current chart hits and new releases or hits up to ten years old. Marcher Sound is music led, with news, information and features of particular local relevance broadcast throughout programming.	
Other comments	GCap Media uses the 97.1 FM transmitter to broadcast a limited local opt-out service to the Wirral – Buzz FM. We will discuss with GCap Media the opportunities to use bit rate allocation to create an opportunity for its carriage.	
Unique Area Content	A local service for the area	
Music to Speech	Minimum 85% music and 10% speech	
Hours of Broadcast	24	

Classic Gold Marcher

Format	Gold	
Licence Description	A simulcast of Classic Gold Marcher, a classic pop hit-led service targeted primarily at over 40s, broadcasting classic pop hits from predominantly 15 to 40 years before broadcast. Speech features national and local news and information relevant to its target audience.	
Fuller Description	Targeted principally at the 35 to 54 age group, the music output consists predominately of hits from 10 to 40 years prior to broadcast. Local and national news is featured alongside clearly defined themed music days that focuses on the hits of the 60s, 70s, 80s and 90s.	
Unique Area Content	A local service for the area	
Music to Speech	Minimum 85% music and 10% speech	
Hours of Broadcast	24	

Dee 106.3

Format	Contemporary	
Licence Description	A simulcast of Dee 106.3, the local Chester FM licence providing a locally focused music and information station for the 25 plus age group in and around Chester.	
Fuller Description	Dee 106.3 is the market leading commercial service serving Chester. Music is a broad mix of popular classic and current hits. Speech includes news and information relevant to people in Chester and its hinterland.	
Unique Area Content	A local service for the area	
Music to Speech	Minimum 85% music and 10% speech	
Hours of Broadcast	24	

107.6 Juice FM

Format	New music, chart and dance	
Licence Description	A simulcast of 107.6 Juice FM, a music station playing chart, dance and rock tracks, and focusing on the tastes and interests of 18 to 34 year olds.	
Fuller Description	107.6 Juice reflects the trends of young people (aged 18 to 34) in Liverpool. It is a music intensive service, playing chart, dance and rock music, with specialist programmes reflecting dance and guitar-led genres. Speech includes local news, club and gig guides, and information of relevance to the target audience.	
Unique Area Content	A local service for the area	
Music to Speech	Minimum 90% music and 5% speech	
Hours of Broadcast	24	

Easy Radio

Format	Easy	
Licence Description	A broad range of easy listening music with a significant element of tracks with a country crossover influence, including rock, folk and blues.	
Fuller Description	Easy Radio is a music based service playing a range of easy listening genres featuring familiar music from 60s to today and drawn from a broad library. Around 25% of the music will be current music. Speech will be national and international news, relevant information for the audience and an element of interactive programme.	
Unique Area Content	A network service offering a broadening of local choice.	
Music to Speech	Minimum 85% music and 10% speech	
Hours of Broadcast	24	

Wales Live

Format	Full Service	
Licence Description	A full service providing mainly current and classic hit music and talk. Speech will include news, traffic & travel, entertainment news, sport and listener interaction.	
Fuller Description	This speech rich service will provide a unique service to the area, providing international, national and Welsh news, information pertinent to everyday lives, including traffic & travel and weather, and opportunities for local listeners and organisations to air their points of views. Other speech will include content addressing the needs for all communities, sport and general entertainment and what's on. The target audience is aged 30 plus. It is proposed that the service will be broadcast on other local multiplexes across Wales, creating a Welsh national service.	
Unique Area Content	A network service offering a broadening of speech choice.	
Music to Speech	Minimum 50% music and 30% speech	
Hours of Broadcast	24	

JACK fm

Format	Variety Pop & Rock	
Licence Description	A service similar to Oxfordshire's JACK fm; the first JACK fm service in the UK. A music intensive station of particular appeal to 35 to 54 year old adults, with news and information relevant to the target audience. Music will be broad based and mainstream spanning more than four decades.	
Fuller Description	JACK fm is a music radio station which complements existing local commercial radio by appealing mainly to older adults through a distinctive 'no format' blend of quality popular pop / rock and classic rock music. The style of the radio station is built around a free sounding theme which, for most of the time, replaces traditional highly formatted radio presentation with listener vox-pops and well produced short voice-links which are distinctive, entertaining and different.	
Unique Area Content	A network service offering a broadening of music choice.	
Music to Speech	Minimum 90% music and 5% speech	
Hours of Broadcast	24	

Temporary Services

62. We are keen to maximise the opportunities for the general public to be involved in radio. We support the notion of temporary services being able to access capacity which may be achievable through bit rate trading. Such services could include one off event led services or a series of events (such as football coverage). Being able to widen events coverage clearly broadens choice, as well as enhancing the attractiveness of digital radio in general. All such proposals are of course subject to obtaining the necessary rights.

In reaching agreement with service providers, we will seek to contract flexible capacity allocations that will reflect the expected listening patterns of their individual audiences. As audiences vary in size and their daily activity changes, we will seek to provide service providers with the opportunity to vary their capacity up and down to meet their particular audiences requirements, by varying bandwidth to suit listening patterns. As the requirements of service providers develop, and enhanced data services are implemented, there may be increasing demand for regular multiplex re-configurations.

- b) Outline the expected target audience of each digital sound programme service to be accommodated on the multiplex, in terms of demographic profile (i.e. age range, gender, socio-economic background), ethnic composition, and/or any other relevant characteristics. To what extent will each of these services cater for local tastes and interests, general or particular?

Marcher Sound / Wirral's Buzz 97.1 FM	
Characteristics	Marcher Sound appeals to those with an interest in contemporary hit radio (which covers a broad range of popular current music from a wide selection of music genres). As a predominantly local radio station, it provides local news, travel and information.
Target Audience & Demographic Profile	<p>Marcher Sound has a strong female bias (57.6%, against its TSA average of 51.7%). Its principal listening is amongst 15 to 34 years olds, who account for 43% of total hours. In relation to socio demographics, Marcher Sound has a strong C2DE profile (54.5% against an area average of 51.4%).</p> <p>Wirral's Buzz 97.1 FM, within its analogue TSA, currently achieves 8% reach and low average hours of 4.3, to make it the 6th commercial station in its TSA in terms of popularity. Buzz 97.1 FM has a strong female bias (65.1%, against a TSA average of 52.8%), with its principal listening amongst 15 to 34 years old (38% of total hours).</p>
Summary	Marcher Sound, and its Wirral relay – Buzz 97.1 FM, is a popular service, with a strong market position. As such, it will play a pivotal role in the promotion of digital radio.

Classic Gold Marcher	
Characteristics	Classic Gold, as an AM station, will strongly benefit from being broadcast in digital quality. Its combination as a hybrid local-network service will ensure older listeners in the PPA receive local news, weather information alongside high-quality presenters. It will be the only station in the market playing entirely Classic Hit music from past decades, with national personality presenters.
Target Audience & Demographic Profile	Classic Gold appeals to those aged 45 plus (78% of its reach is derived from this age group). In W&C, it achieves a strong female bias (63.2%), and a strong C2DE profile (56.3% against an area average of 51.4%).
Summary	As a format that suffers from the decline in AM listening, we believe that the format has great potential as a digital service.

Dee 106.3	
Characteristics	Dee 106.3 is a full-service local radio station, providing a comprehensive mix of local news, information and speech features of relevance and interest to its target audience.
Target Audience & Demographic Profile	Dee 106.3 is a popular service, and the leading commercial service within its analogue TSA. Its principal audience is aged 35 to 44 (delivering 32% of total hours), whilst it is also strong with females aged 15 to 25 (24% reach and 15% of total hours) and 45 to 54s (21% reach and 12% of total hours). In terms of demographic performance, Dee 106.3 has a slight female bias (52.8%, against an area average of 51.7%), but outperforms the market in relation to socio demographics, achieving a 57.5% ABC1 profile against the area average of 52%.
Summary	As a popular local service, appealing to an upmarket audience, Dee 106.3 is an important addition to the multiplex.

107.6 Juice FM	
Characteristics	107.6 Juice FM is a popular youth service, reflecting on the musical tastes and interests of listeners in Liverpool. In addition to the City of Liverpool, Juice's analogue footprint covers a significant area of the Wirral.
Target Audience & Demographic Profile	Juice FM has equal appeal among the sexes, with just a slight female bias (53.4%), which reflects the market (52.8% female). Its principal audience is aged 15 to 24, delivering 53% of its total hours. In relation to socio demographics, whilst Juice FM has a slight C2DE bias, when this is compared to the marketplace as a whole the station outperforms amongst ABC1s, delivering 48.2% against the area average of 45.8%.
Summary	The inclusion of Juice FM ensures that the service is available in digital quality in its home city of Liverpool, as well as extending its footprint across the wider multiplex area. Its music genres (of chart, dance and rock music) are extremely popular with its target audience. In contrast to the more specialist genre services carried on existing multiplexes, by broadcasting locally, Juice FM is able to super-serve its locality with relevant news, music updates and live entertainment information.

Easy Radio	
Characteristics	Easy Radio focuses on a broad range of easy listening music with a significant element of tracks with a country crossover influence, including rock and folk.
Target Audience & Demographic Profile	Our research highlights high interest in the Easy Radio concept, and that the service was likely to appeal to an older, 45 plus audience (65%), with a strong female bias. The service is likely to have equal appeal amongst ABC1s and C2DEs. The format scored strongly with non-DAB owners, of whom an above average 25% would personally choose to listen to this station. Significant interest was also noted amongst existing BBC listeners (30%) and, in particular, amongst those who currently only have BBC stations in their listening repertoire.
Summary	A popular format that would appeal to an older audience, bring new listeners to DAB digital radio and attract an audience from the BBC.

Wales Live	
Characteristics	The only mixed music and speech service broadcasting across the whole of the W&C area, and the first commercial station with an objective to offer an all Wales speech rich commercial service.
Target Audience & Demographic Profile	The target audience for this service is 30 plus, and our research highlights that it would have broad age appeal. Research identifies that around 20% of adults would choose to listen to this service. Women appeared more interested in this concept than men (22% v 17%), and the service is likely to appeal equally to ABC1s and C2DEs. 18% of DAB owners would like to hear this type of station, rising to 20% of those currently without a digital radio. There was high interest in this type of format among those people who currently have BBC stations in their listening repertoire (23%) or who only listen to the BBC (26%).
Summary	A popular format that would have broad audience appeal, creating Wales' first national commercial speech service. It would bring new listeners to DAB digital radio and attract an audience from the BBC.

JACK fm	
Characteristics	JACK fm will appeal to a demographic that traditionally has grown up with commercial radio but has increasingly found themselves switching to music services provided by the BBC, especially BBC Radio 2. A broad and varied rock music mix with less repetition will allow JACK fm to achieve an upmarket audience.
Target Audience & Demographic Profile	JACK fm will particularly appeal to 35 to 54 adults, with a male 40 something as its core target listener. Our research highlights that the format would have a sex profile that matches the population as a whole. In terms of age it is found to have a very broad appeal with 60% of listener under 45 and 40% over. The service is likely to a slightly higher proportion of ABC1s. The format had strong appeal amongst those who currently do not own a DAB set (34%). A higher than average 35% of BBC listeners would like to hear this type of station.
Summary	JACK fm is a new style of radio combining broad musical genres with an irreverent style. The station will also cater for an audience that has left commercial radio for stations like Radio 2 that better cater for their musical tastes.

c) If agreement has been reached (either firmly or provisionally; state which) with particular providers of some or all of the digital sound programme services to be accommodated on the multiplex, identify these programme providers. For each one, state whether it has already been issued by Ofcom with a licence to provide a local digital sound programme service.

Service	Agreement	DSPS Held
Marcher Sound	We have written to GCap Media asking their views as to carriage of Marcher Sound and Wirral's Buzz 97.1 on the multiplex. In addition, terms of carriage have been sent to GCap Media.	Yes
Classic Gold Marcher	We have written to Classic Gold / GCap Media asking their views as to carriage of Classic Gold Marcher on the multiplex. In addition, terms of carriage have been sent to Classic Gold / GCap Media.	Yes
Dee 106.3	Confirmed – Dee 106.3 Ltd	No
Juice FM	Confirmed – UTV Radio (GB) Ltd	Yes
Easy Radio	Confirmed – Easy Radio Ltd	Yes
Wales Live	Confirmed – Town & Country Broadcasting Ltd	No
JACK fm	Confirmed – Absolute Radio International Ltd	No

d) Give details of any programme-related 'data' or other services to be provided to enhance the audio elements of the digital sound programme services proposed to be provided. List separately those provided by the relevant digital sound programme licensees themselves (as 'ancillary' services) and those, if any, provided by other parties under a digital additional services licence.

63. MuxCo W&C believes that innovative data services play a key role in providing value-added services to consumers. Their role in both supplementing the audio stream and navigating towards content is hugely important. Additionally on a local multiplex, data services can provide access to valuable local content.

As part of our consumer research, we researched attitudes to ancillary data services. In response to the question "Which, if any of the following types of information would you like to receive in visual form?" - Local news (47%), national news (42%) and weather (48%) were the three main information types wanted as visual data. Around a third or more would also be interested in traffic and travel news (34%), national sports (33%) as well as local sports news.

In response to the question "Which, if any of the following types of information would you like to receive in audio form?" - once again, local news (59%), national news (52%) and weather (48%) were the three main types of information listeners would like to be able to receive in audio form. A third or more would also add to this list traffic and travel news (39%), national sport (35%) and local sport (33%).

Consequently, we feel that it is important to create an environment with our service providers that encourages them to create new and innovative content streams. Our chosen multiplex platform will support DLS and MOT carousel using simple, industry standard interfaces allowing service providers to use the "off-the-shelf" and well-supported software packages for generating content. Therefore, from launch, all service providers will have access to:

- Dynamic Label services
- Electronic Programme Guide

As data technologies and standards mature, we will work with the service providers to launch other data services (such as *Broadcast SlideShow*).

Dynamic Label

64. DLS is a very simple technology – but its simplicity gives it enormous strengths. It demonstrates immediately a difference between a digital radio and a traditional FM receiver. Consumers value the information provided unexpectedly highly – informal feedback from listeners is very positive about features such as displaying information on the currently playing song.

We are supportive of recent extensions to the DLS spec, such as Pure Digital's IntelliText® technology, which stores the scrolling text to allow the user to navigate, by topic, straight to the news they want. Service providers can generate DLS very simply, using a range of software packages that integrate into their existing systems.

Electronic Programme Guide

65. Electronic Programme Guides ('EPG') are important in a multi-channelled environment – they allow listeners to find stations and programmes quickly, and enable functionality like “time-shifting” of stations. They enable service providers to promote their new services and programmes. The EPG allows the user to take advantage of features such as programme summaries, search by subject or channel, immediate access to the selected programme and also to set reminders for their favourite shows. Our research showed a high level of interest (31%) in an EPG. We will make an EPG channel available to all service providers. This channel will conform to the ETSI TS 102 371 DAB EPG standard, currently broadcast by the two existing national multiplexes. We will encourage our service providers to use some of the more advanced features of the EPG, such as “series linking” and incorporating telephone, SMS, website and email addresses into the schedule data.

We have had detailed discussions with All In Media Ltd ('AIM') relating to the launch of an EPG channel on the multiplex. The Managing Director, Chris Gould, led the WorldDMB TaskForce that created the DAB EPG standard. In the event of award of the licence, it is our intention to work with AIM to launch the EPG channel on this multiplex.

Use of variable-XPAD

66. From launch, each service provider will be able to run programme-related data services within their short XPAD data capacity.

We will work with the service providers, NGW and colleagues across the industry to assess the opportunities to improve the performance of the audio encoders for stereo at rates under 128 kbits. If satisfactory and following any required approval from Ofcom, we may wish to use some of any additional XPAD capacity that was freed up to allow them to use that capacity for enhanced programme related data services.

With Folder Media and other associates, we have a strong team who have substantial experience in the field of launching data services, ranging from the work that was undertaken on the world's first commercial data services in 2000 (The DigiZone) through to the development of standards such as the EPG and the launch of highly dynamic text services.

We also intend to use our experience to help service providers to launch new programme-related data services. For example:

Tagging (Book marking)

- The ability to log a song on your mobile phone / device in order to download it later.

Broadcast Slideshow

- Opportunities for radios / devices to add visual content to make the programmes more engaging, for example show the covers of albums that are currently playing on the radio.

“Red button” functionality

Competitions and Voting:

- For example, when listening to a breakfast show, a listener could use the red button to vote on the next tune to be played or select the correct answer to win a prize.

Enhanced Advertising:

- For example, the user is listening to a radio station and hears an advert for a new car which could be audio but also visually demonstrated on their device and using the red button functionality send information via a URL link to the external a car dealer’s web site.

Rewards:

- For example, the user could get free content (music downloads for example) in return for responding to an advertiser’s call to action. For example clicking through to the web page could generate redeemable loyalty points.

e) If it is intended to use an encryption system, state that this is so, and make clear to which digital sound programme services it will apply, and how listeners will subscribe to the service.

67. It is not proposed that any services will be encrypted and none of the proposed service providers has indicated an interest in encryption.

12. Digital additional services and television licensable content services

Provide details of any digital additional services and/or television licensable content services planned, other than programme-related data services (see Q.11(d) above), and the proportion of the total multiplex capacity which will be allocated to each of these.

The response to this question may be submitted in confidence.

** Applicants should note that this information is not relevant to section 51(2)(d), which relates only to digital sound programme services, but this question is positioned here for convenience.*

68. Our response to this question is submitted in confidence in Part B.

Section 51(2)(e): Broadening of local commercial DAB choice

13. Broadening of choice

Outline how the programming provided by the local digital sound programme services (other than BBC services) proposed will broaden the range of local digital sound programme services available in the area, and describe the extent to which the proposed local digital sound programme services will cater for tastes and interests different from those already catered for by local digital sound programme services already available in the area. If the licence applied for is the first local radio multiplex licence to be advertised in an area, detail the breadth of programming delivered by the range of local digital sound programme services to be provided on that local radio multiplex alone.

69. Whilst the Northeast Wales and West Cheshire multiplex is the first local radio multiplex licence to be advertised to service this specific area, its PPA is overlapped by the Liverpool multiplex (76%, owned by Emap Digital), and by the North West Regional multiplex (81%, owned by MXR). The services currently on these multiplexes, and their formats are:

Liverpool	
Radio City 96.7	A simulcast of Radio City 96.7, a modern, mainstream, contemporary hit radio station, broadcasting popular current music from a wide selection of music genres. The majority of its music is from the preceding five years. Speech includes news and information relevant to a 15 to 44 target audience, with a focus on Liverpool. Approximately 80% music and 20% speech.
Magic 1548	A simulcast of Magic 1548, a music-led service playing mainly soft and melodic tracks featuring news and information relevant to its 35 to 44 target audience, and with a focus on Liverpool. Approximately 80% music and 20% speech.
Classic Gold	A networked classic pop hits music service with music from the last four decades, but predominantly the 60s and 70s. News and information is relevant to an over 40 audience. No local programming or content is currently provided. Approximately 85% music and 15% speech.
Xfm	A simulcast of XFM Manchester, featuring innovative, modern rock with attitude. News and information will be relevant to a core 15 to 34 audience. No local programming or content is currently provided (although local news and features required from 1/3 digital penetration). Approximately 80% music and 20% speech.
Kiss	A simulcast of London's Kiss 100 dance music service. News and information will be relevant to the target audience of 15 to 34 year olds. Local news and travel at breakfast is required from 1/3 digital penetration. Approximately 85% music and 15% speech.
Smash Hits	A networked digital only pop radio service playing music from teen bands and new up-tempo chart songs, with target appeal amongst teenagers. News, information and showbiz news relevant to the target audience is provided. No local content or features. Approximately 95% music and 5% speech.
Kerrang	A service similar to the West Midlands' Kerrang 105.2 FM devoted to playing rock music with attitude. Targeted at 15 to 34 year olds. Speech includes news and information relevant to the target audience. No local content or features. Approximately 95% music and 5% speech.
Heat	A networked digital-only rhythmic music service playing current and non current tracks. News and information targets the core audience aged 25 to 44. No local content or features. Approximately 95% music and 5% speech.

Emap Digital has a commitment to introduce an additional transmitter for the Liverpool multiplex at Moel – Y - Parc, which will significantly expand its coverage over much of Northeast Wales and West Cheshire. A number of the formats carried on the Liverpool multiplex also scored well in our MuxCo W&C research – for instance, BBC Merseyside and genre specific stations, such as Kerrang and XFM. The expansion of the footprint of the Liverpool multiplex into Northeast Wales and West Cheshire negates the need to replicate these formats or services on our own multiplex, enabling us to significantly broaden choice with new formats and services within our unique PPA.

North West	
Galaxy 102	A simulcast of Manchester's Galaxy 102, playing a mix of dance and rhythmic music and targeting young adults aged between 20 and 29 years. Speech includes news and entertainment features. Approximately 85% music and 15% speech.
Century 105	A simulcast of the regional Century 105. A full service station playing mainly adult contemporary music, with some specialist music including easy listening and Soul/Motown. High speech output includes news, local information, weekday phone-ins and comprehensive sports coverage. Whilst covering the broader North West region, Century FM historically has had a slight Manchester focus. Century targets 25 to 54 years old. Approximately 67% music and 33% speech.
100.4 Smooth FM	A simulcast of the regional 100.4 Smooth FM. A service targeted at listeners of all ages who enjoy jazz, soul, blues and R&B. The service includes regional news and information. Approximately 85% music and 15% speech.
Capital Disney	A networked digital-only service targeting pre-teens and teenagers aged between 10 and 16. Plays new music and includes relevant local news and information. During peak times includes four hours of locally relevant presenter led programming. Approximately 95% music and 5% speech.
Choice	A networked digital only service based on London's Choice FM, playing a blend of classic and recent urban tracks appealing to fans of this genre aged between 15 and 34. Includes regional news and information. Approximately 95% music and 5% speech.
Heart	A networked digital-only service, featuring melodic adult contemporary hits together with classic tracks. Target audience is females aged 25 to 44. Includes regional news and information. During peak times includes four hours of locally relevant presenter led programming. Approximately 95% music and 5% speech.
The Arrow	A networked digital-only service playing classic rock with some new rock, appealing to 40 to 59 years old. Includes local news and information. During peak times includes four hours of locally relevant presenter led programming. Approximately 95% music and 5% speech.
Real Radio	A networked digital-only service providing easy listening music from the preceding 40 years, appealing to listeners aged 45 years plus. Includes local news and information. During peak times includes four hours of locally relevant presenter led programming. Approximately 95% music and 5% speech.
LBC	A service similar to LBC 97.3, a speech service with studio-based discussions and phone-ins, live debates and features, with regional news and information.

70. Given the significant choice of listening already available on these two existing multiplexes, we believe the new Northeast Wales and West Cheshire multiplex needs to broadcast predominantly local stations alongside carefully selected new digital brands. We have taken into account the services carried on them in our Broadening of Choice review.

Marcher Sound / Wirral's Buzz 97.1			
Service	A contemporary hit radio service broadcasting popular chart songs from a wide range of genres, as well as high quality and entertaining speech. Marcher Sound broadcasts unique programming on weekdays from 6am to 7pm, Saturdays 7am to 7pm and Sundays 8am to 4pm. At other times, Marcher Sound shares network programming with other GCap services, although with local idents and advertising. It is the only station on the local multiplex whose editorial concentrates on the broader Wrexham and Chester area.		
Comparative Services	<i>Liverpool</i> Radio City	<i>MXR</i> None	<i>MuxCo W&C</i> None
Broadening of Choice characteristics	As a broad appeal service for under 40s, there will undoubtedly be some duplication with the music output on other CHR formatted services. However, Marcher Sound is differentiated by its distinctive and unique editorial focus on Wrexham and Chester.		
Other Comments	<p>Marcher Sound utilises its transmitters to provide a separately branded service on its Wirral transmitter – The Wirral's Buzz 97.1. There is an analogue licence commitment to provide a separate breakfast programme on The Buzz. At present, a separate drivetime programme is also provided. At other times, programmes are shared with Marcher Sound and the One Network.</p> <p>For reasons outlined in this document, we believe that the take up of digital radio will be best served by an overall widening of choice. Given the level of demand for capacity on this multiplex and uncertainty as whether GCap would contract with MuxCo for the provision of this relay service, we have not included Buzz 97.1 as a proposed service. However, we will be happy to discuss with GCap Media as to bit rate allocation and use of codec technology to create opportunities for the carriage of the service.</p>		

Classic Gold Marcher			
Service	A gold music service playing hits from the last four decades. Classic Gold Marcher broadcasts unique programming on weekdays between 3pm and 7pm. At other times, it shares network programming with other Classic Gold services, although with local drop-ins, news and advertising.		
Comparative Services	<i>Liverpool</i> Classic Gold Magic 1548	<i>MXR</i> None	<i>MuxCo W&C</i> None
Broadening of Choice characteristics	Whilst there will be some musical overlap with other gold services, Classic Gold Marcher is the only service playing this genre with specific local programming and local news and information for Wrexham and Chester, including travel, weather and news.		
Other Comments	The upgrade to digital and stereo output will help improve the sound of the station and its appeal to potential listeners who have yet to enjoy its mix of music, personalities and local information.		

Dee 106.3			
Service	The local Chester FM licence providing a locally-focused music and information station for the 25 plus age group in and around Chester. Dee 106.3 plays a broad mix of classic and current hit music.		
Comparative Services	<i>Liverpool</i> None	<i>MXR</i> Real Radio Century	<i>MuxCo W&C</i> Wales Live
Broadening of Choice characteristics	<p>Whilst there are no specific comparable services to Dee 106.3, as a station playing a wide variety of music, there will be some music overlap with other services as it is very much a current and classic hits based radio station. Closest in musical terms are Real and Century, although these are clearly regional services, serving a significantly larger transmission area.</p> <p>Dee 106.3's editorial policy, its focus on Chester and its immediate surrounding area, and its presentation style provides significant differentiation, and will provide additional choice to consumers who live outside the Dee 106.3 analogue footprint but who have an affinity with the city and the sound of the station.</p>		
Other Comments	Dee 106.3 is a locally focused music and speech service that demonstrates that broadening local choice is commercially viable.		

107.6 Juice FM			
Service	Liverpool's youth station, playing chart, dance and rock tracks, and focusing on the tastes and interests of 18 to 34 year olds.		
Comparative Services	Liverpool Kiss Xfm Kerrang	MXR Galaxy	MuxCo W&C None
Broadening of Choice characteristics	<p>Whilst a number of specialist services exist, each focuses on specific genres and none carry the range of music that Juice FM plays. In addition, none of the specialist services are Liverpool based, being simulcasts of services generated in either London, Birmingham or Manchester. They currently provide no local content relevant to W&C.</p> <p>The inclusion of Juice FM will increase choice to younger radio listeners who live outside its analogue footprint but who have an interest in youth culture and the wide range of music genres played.</p>		
Other Comments	<p>Juice FM is a Liverpool focused youth service that reflects the broad music tastes of its target audience, with speech focusing on their lifestyles. It is expected that over time speech, in particular entertainment news and what's on information, will reflect the bigger audience available through the multiplex coverage.</p> <p>For younger listeners across the wider multiplex coverage area, Juice FM will be a welcome addition to the radio landscape and providing local commercial competition for BBC Radio 1.</p>		

Easy Radio			
Service	A music based service playing a range of easy listening genres featuring familiar music from 60s to today and drawn from a broad library.		
Comparative Services	Liverpool Magic 1548	MXR Century FM Smooth FM Real Radio	MuxCo W&C None
Broadening of Choice characteristics	<p>The broader music mix of Easy Radio, in particular music from artists with a country crossover influence including rock, folk and blues, provides a differentiator with the above services.</p> <p>In addition, plurality of ownership provides additional broadening of choice.</p>		
Other Comments	Easy's speech, with news and relevant information for the audience and an element of interactive programme, will also act as a point of differentiation.		

Wales Live			
Service	A mixed music and speech service, playing a broad mix of current and classic hits, alongside international, UK and Welsh news, information relevant to the listener, and interactive programmes.		
Comparative Services	Liverpool None	MXR Century FM Real Radio LBC	MuxCo W&C Dee 106.3
Broadening of Choice characteristics	<p>The proposed service will be only speech rich service on MuxCo W&C. As such it will cater for the untapped demand for news and information.</p> <p>LBC is a networked speech service with limited regional content, and little focus on the W&C market. The new CityTalk service will focus on news and lifestyles within Liverpool. As such it will appeal to those who commute into the city. It is unlikely to have much coverage on the W&C market. The Wales Live service will provide an alternative source of news and speech content, with a focus on Wales. It will also provide commercial competition for BBC Wales and BBC Cymru</p> <p>Whilst there will be some music cross over with Century and Real, the overall mix and style of music and speech of the new service will provide differentiation.</p>		
Other Comments	<p>It is the intention for the Wales Live service to broadcast on other local Welsh multiplexes, to become the firstly speech rich commercial service for Wales.</p> <p>MuxCo W&C also notes the recent award of the new Liverpool FM licence to Emap for the CityTalk, a speech service that will provide news, sport, features, documentaries, advice, phone-ins and studio discussions. We believe its focus will be on the city of Liverpool and expect that CityTalk would seek carriage on the Liverpool multiplex from its parent company, EMAP.</p>		

JACK fm			
Service	A music intensive service designed to complement existing local commercial radio by appealing mainly to 35 to 54 year olds through a distinctive 'no format' blend of quality music. The music policy is broad based and mainstream, with an overall theme of pop / rock and classic rock. The style of the radio station is built around a free sounding theme which, for most of the time, replaces traditional highly formatted radio presentation with listener vox-pops and well produced short voice-links which are distinctive, entertaining and different.		
Comparative Services	<i>Liverpool</i> Xfm Kerrang	<i>MXR</i> The Arrow	<i>MuxCo W&C</i> None
Broadening of Choice characteristics	Given the scope of the format, some music cross-over will arise with other services audible in the area. However, JACK fm's broader music repertoire, its focus on the 35 to 54 year old audience and its overall presentation style will be significant differentiators.		
Other Comments	JACK fm is a new style of radio combining broad musical genres with an irreverent style. The station will also cater for an audience that has left commercial radio for stations like Radio 2 that they feel better caters for their musical tastes.		

Section 51(2)(f): Local demand or support

14. Audience requirements

Summarise the main findings of any original market research undertaken, or any analysis of existing audience research information, or any other form of evidence which demonstrates demand for the types of programme service and/or programme-related data or other data services proposed, or has otherwise influenced the applicant's proposals.

If original market research has been undertaken, please provide the following information for each piece of research:

- a) A statement of the key objectives of the research;
- b) The specific questions that the research sought to answer;
- c) How the research was conducted;
- d) The size and composition of the sample(s);
- e) When and where the research was conducted;
- f) A summary of the main findings from the research, showing how these demonstrate evidence of demand for the service proposed – this summary should represent a fair and accurate summary of the full results;
- g) A copy of any detailed audience research report or analysis, from which the summary provided in the main application document has been derived, full data tables for any quantitative research undertaken, and any questionnaire used (these may be submitted in confidence).

Please provide your responses to (a) – (e) in tabular format.

Key Objectives		Specific Questions	How Conducted	Size and Composition	When
Desk Research	To get an up to date picture of the digital landscape.	In particular to estimate the impact of the adjacent and overlapping multiplexes.	All DRDB and relevant RAJAR data on digital audiences reviewed Analysis of overlaps of existing multiplexes, and the proposed extension of the Liverpool multiplex.	Not relevant	March/ April 2007
RAJAR	To better understand the local radio market.	To track the performance, strengths and weaknesses of existing services.	Using the Octagon analysis system and RAJAR data.	Not relevant	March/ April 2007
Consumer Study	To gauge consumer awareness, understanding and usage of DAB digital radio. To discover ideas for new radio formats and data usage applications. To quantify interest in likely formats and data usage applications. To estimate audience levels, individually and collectively for the proposed multiplex.	To identify the likely audience profiles for each planned service and to see how these services work collectively to enhance the total audience potential for DAB digital radio. To look at the propensity to listen and the impact that the new services collectively would have on the existing market.	Consumer survey conducted by TNS. All interviews conducted in-person using Computer Aided Personal Interviewing equipment.	500 adults 15+ from across the PPA. Sampling PPS Quota controls to known demographic profile.	April 2007

71. Through our association with NGW, we have also been able to access the very considerable research dossier undertaken as part of their national commercial multiplex application. In particular, we have reviewed the qualitative research to gauge consumer attitudes towards DAB digital radio. Whilst not strictly pertinent to this multiplex area, we believe that the views found in the research are applicable across the UK as a whole.

A. Desk Research on Uptake of DAB

72. A review of DRDB published data was undertaken to ensure the business planning was fully up to date with latest penetration levels and forecasts for digital take-up. Our findings are summarised in answer to Q.10(d).

In addition, we analysed the likely impact of the inclusion of the Moel – Y - Parc transmitter being added to the transmission network of EMAP's Liverpool multiplex. Ofcom details the overlap between the W&C and Liverpool multiplex to be currently 76%. It was therefore important that we evaluated our potential services against those offered by Liverpool multiplex to ensure that we both complement them and broaden listener choice in Wrexham & Chester.

B. RAJAR – Analysis of Market and DAB digital radio

73. The main purpose of our RAJAR analysis was to determine existing radio listening behaviour in order that we could identify formats that would complement existing services and create the best chance for the multiplex to maximise listeners and listening hours, especially with regard to the BBC.

We have also reviewed national radio data in order to better understand the relationship of digital radio within the total radio mix and how this might grow over time.

Analysis was undertaken using the combined TSA of Marcher Sound, Wirral's Buzz 97.1 and Dee 106.3 FM, with RAJAR analysed for the last 3 years, using rolled 12 months data.

The local market

74. The adult population for the W&C multiplex within the PPA is 673,000 adults (which is close to the combined RAJAR TSA evaluated). For the purposes of the application, we have evaluated the potential against the PPA figures.

It should be noted that given the proposed transmitter configuration, the full potential adult coverage of the multiplex will be 1.05m, which might be selected as the research TSA by some services, in particular the new digital only services.

The audience results for all radio between 2004 and 2006 showed that following a dip in 2005, all radio reach improved in 2006, with a corresponding (but small) rise in the total radio listening (hours). It should be noted that average hours declined in 2006. Further analysis suggests that it is younger adults who are listening less.

Current radio listening

75. The BBC has dominated the radio listening landscape in across Northeast Wales and West Cheshire area for several years.

'All BBC' currently accounts for 59.9% of all radio listening, compared to its national average of 54.4%. Both BBC Network services and BBC Local services perform above average in this area, with a particularly strong BBC Radio Merseyside. In relation to commercial radio, total performance is 4.4 percentage points lower than average; a result of poor performance amongst the national services, and specifically Virgin Radio and Talksport.

The following table summarises RAJAR performance in 2006 (rolled averages) within Northeast Wales & West Cheshire and compares this with the UK as a whole.

Market Share	MuxCo W&C	UK
All BBC	59.9%	54.4%
• BBC Network	46.6%	44.0%
• BBC Local	13.3%	10.4%
All Commercial	38.8%	43.2%
• INR	7.7%	10.5%
• ILR	31.1%	32.8%
Other	1.3%	2.3%

76. The following chart details the relative market shares between BBC and commercial radio for three key age groupings. It highlights that the BBC dominates amongst those aged 35 plus. Whilst the commercial sector is strong with 15 to 34s, its market share amongst this age group has slipped dramatically with the BBC showing significant improvement. At the older end of the age spectrum, the BBC still has double the share amongst 65 pluses when compared with the commercial sector, despite recent improvement with newer commercial stations targeting this demographic.

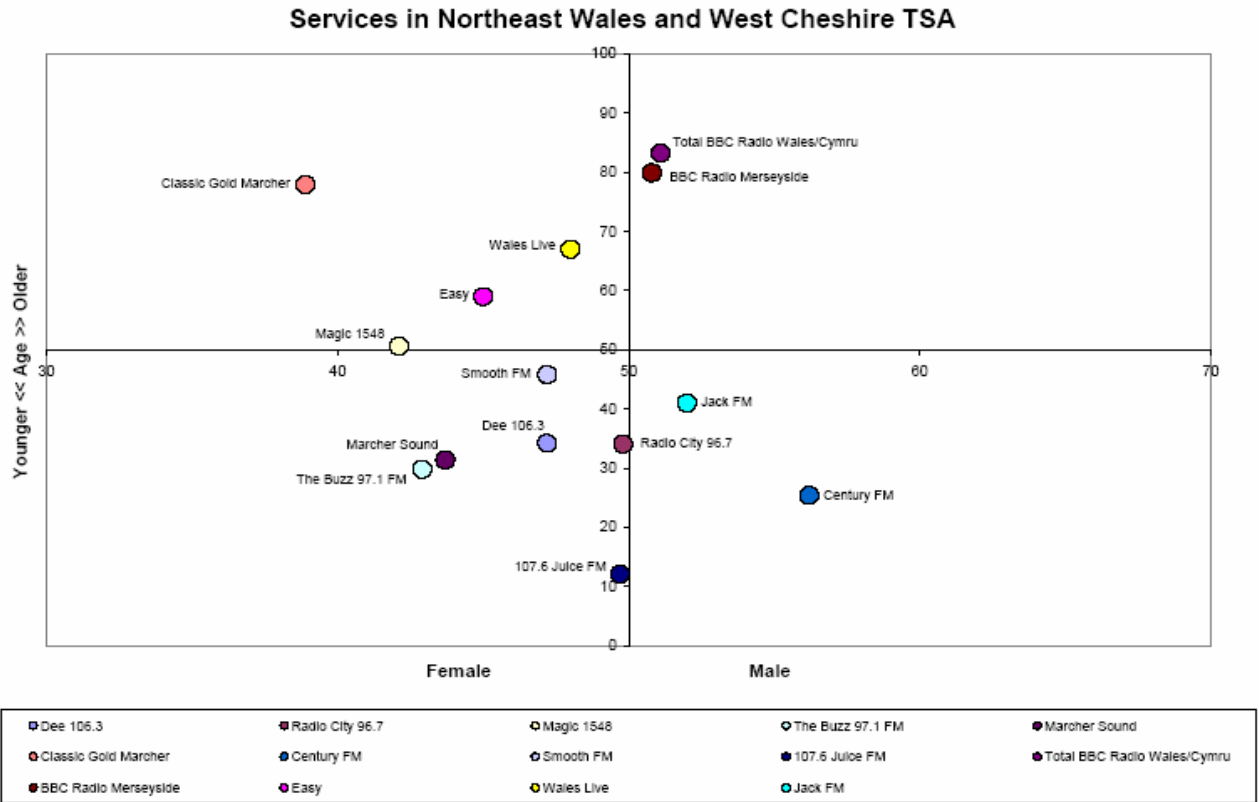
Market Share by Age	2004	2005	2006
15 to 34			
All Commercial	59.8%	58.7%	52.0%
All BBC	39.0%	39.9%	46.5%
35 to 64			
All commercial	39.9%	41.0%	39.9%
All BBC	47.2%	45.6%	47.9%
65 pluses			
All Commercial	21.1%	20.8%	23.2%
All BBC	49.7%	51.2%	46.2%

77. The following table summarises the historical performance of the individual local services in the combined TSA of Marcher, Buzz 97.1 and Dee 106.3. Despite some initial share increases for all stations (bar Buzz 97.1), we see that in 2006 all stations, with the exception of Classic Gold Marcher, have lost share.

	2004	2005	2006
Marcher Sound			
Weekly Reach %	11.1%	10.5%	10.3%
Total Hours	760	795	729
Market Share	5.4%	5.6%	5.0%
Buzz 97.1			
Weekly Reach %	8.3%	6.8%	6.5%
Total Hours	343	258	194
Market Share	2.4%	1.8%	1.3%
Classic Gold Marcher			
Weekly Reach %	4.1%	2.5%	3.0%
Total Hours	204	223	235
Market Share	1.4%	1.6%	1.6%
Dee 106.3			
Weekly Reach %	4.6%	4.9%	5.2%
Total Hours	222	320	293
Market Share	1.6%	2.3%	2.0%
Juice FM			
Weekly Reach %	3.9%	4.4%	4.1%
Total Hours	215	232	213
Market Share	1.5%	1.6%	1.5%

Source RAJAR rolled years

78. The following diagram demonstrates the strengths of the existing local commercial services, and the new digital services proposed. RAJAR data (rolled 2006) has been used for existing analogue services, with profiles of the digital services derived from our consumer research.



As the diagram shows, the proposed new services satisfy a need demonstrated in the research to increase appeal with women and those aged 45 plus. The inclusion of Juice FM meets a need with younger listeners - compared with the established local ILR service, it is much less female biased and significantly younger.

The take up of digital radio

79. The number of adults living in homes with access to DAB digital radio is currently 16% (Q4 06). This figure is significantly lower than our consumer survey, which highlights ownership levels in the W&C TSA of 32%. In our forecasts, we have worked on the national average, since this was viewed as a prudent approach.

80. The following table details the profiles of DAB owners. It shows that adults in DAB homes in the W&C TSA are more likely to be in the 35 to 54 age group compared with the UK DAB profile, and more male biased. When compared with the UK population profile, we see the strength expands to include 55 to 64s.

	Profiles of			W&C Index on UK Population
	UK *Adults in DAB Homes	W&C Adults in DAB Homes	UK Population Profile	
	%	%	%	
Men	52.5	56	48.5	115
Women	47.5	44	51.5	85
15 to 24	15.8	17	15.9	107
25 to 34	14.3	10	15.5	65
35 to 44	20.7	21	18.7	112
45 to 54	17.8	22	15.7	140
55 to 64	16.3	17	14.5	117
65 plus	15.2	13	19.7	66

Source RAJAR 12 mths ending Q4 2006

81. RAJAR asks respondents about their awareness of all radio stations that are potentially available to them. MuxCo W&C has had access to analysis undertaken on a national basis, which looked at awareness and reach conversion. This highlighted that reach is not keeping pace with the rise in DAB digital radio penetration and underscores our belief that individual programme service providers will need to undertake extensive consumer marketing, over and above the work undertaken by the DRDB, to ensure that services attract listeners on the W&C multiplex. This will be particularly relevant to the digital only services without access to an analogue service to assist in cross platform promotion.
82. The following tables look at the overall time spent listening to the radio by 'All Adults' and 'All Adults in DAB Homes'. These have been indexed against each other. Across the last 3 years, adults in homes with DAB sets listen to the radio for an average 16% longer across a week. During 2004, that average was 21% higher. As the sales of DAB sets started to take off in 2005, the average has dropped back as DAB sets may be a more general set replacement than a purchase to gain access to DAB and its unique service offerings.

Average hours per week listening to the radio by all adults

2004				2005				2006			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
24.7	24.4	24.4	24.0	24.0	23.9	24.1	23.9	23.8	23.5	23.9	23.5

Average hours per week listening to the radio by adults in DAB homes

2004				2005				2006			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
29.4	29.2	29.7	29.1	28.0	27.2	26.6	27.8	27.6	27.0	27.0	26.5

Index comparing listening by adults in DAB homes v. all adults

2004				2005				2006			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
119.0	120.7	121.7	121.3	116.7	113.8	110.4	116.3	116.0	114.9	113.0	112.8

These findings are very encouraging since they strongly indicate that access to DAB digital radio is having a positive impact on time spent listening to radio in total, and underpins our consumer research findings which has indicated that listeners would increase the amount of time spent listening to radio in total in order to incorporate our new services into their repertoires.

Furthermore, when looking at respondents with access to DAB in home, we found that average time spent listening to digital only services was higher than amongst all adults to these services. Interestingly, when we looked at the simulcast stations, we found that this was not the case. Ease of access, which DAB digital radio offers, is encouraging listeners to broaden their consumption away from their traditional analogue stations.

The interesting aspect about this analysis is that listening to other digital services - quasi national, regional and local (many of which are known brands), is demonstrating the preference to listen via DAB digital radio when available.

The platform survey data undertaken with respondents with digital access, suggests that all digital listening represents 22.7% of all radio listening, split DAB 12.3%, DTV 6.1% and the Internet at 3.6%. Overall, therefore, analogue remains dominant with a 77.4% share:

The overall share of digital radio listening divided between the BBC and commercial radio highlights that the commercial sector commands the majority share at 56% (Q4 2006).

C. Main consumer survey – Main Findings

83. The following paragraphs summarise the findings of our commissioned consumer research which was undertaken on behalf of MuxCo W&C by Hallett Arendt. Their full report is attached as Part D.

84. DAB access and ownership

DAB digital radio penetration in the area at 25% is significantly higher than the national average. Our research suggests that services must aim to predominantly appeal to the local commercial radio audience in order to stimulate uptake of digital radio, since the BBC audience, through its preponderance of national services, already has significant digital coverage.

85. Propensity to purchase DAB digital radio

Among current non-owners, we found that only one in five would be interested in buying a DAB digital radio, implying that the task ahead is a difficult one. However, interest in buying a DAB radio was higher among those interested in the range of service proposed by Muxco W&C.

However, once respondents had been exposed to some of the new opportunities that DAB digital radio can bring, this had a positive impact amongst current non-DAB owners. More than twice the previous level claimed that they would be interested in buying a DAB radio at the end of the survey. This finding strongly underpins the needs for more consumer focused marketing activity driven by the existing stations that listeners trust.

86. Motivation for buying a DAB digital radio

The key motivators to purchase DAB digital radio were

- The prospect of improved sound quality of existing analogue services (39%)
- Interference free reception (35%)
- Ease of tuning (23%)
- A desire to keep up with new technology (21%)
- A desire for a wider range of new stations (19%)

The findings on the prospect of improved sound quality for existing analogue services underpins our proposal to offer carriage for all existing analogue services to broadcast in stereo.

87. **Received value of DAB digital radio**

Improved sound quality (30%) and interference free reception (20%) remain DAB's biggest assets among digital radio owners after purchase. However, younger owners, i.e. those under 25, rated a wider range of new stations as the biggest asset (30%). Women were also more likely to say this than men. New services therefore need to reflect the current profile of owners and meet the desire for new services, particularly among women

88. **Catalyst to purchase DAB digital radio**

The main reasons why people would be tempted to buy a digital radio if the price was also right for them were:

- Interference free reception (37%)
- Improved sound quality of existing service (31%)
- Ease of tuning (25%)
- Prospect of a wider range of new stations (22%).

89. **Affect of access to DAB on overall radio listening**

Owning a digital radio is likely to encourage more radio listening. 30% claim they now listen to more radio. Under 35s in particular were more likely to say this.

90. **Listening by platform**

Whilst listening in the home remains the dominant way in which radio is listened to, the car is becoming increasingly important. This underpins our view that services, either as audio features or as data content, for the listener on the move would have considerable interest.

91. **Radio listening behaviour**

Our research confirmed that the area's radio listening is dominated by the BBC, where the highest scoring services were:

- Radio 2 (24%)
- Radio 1 (22%)
- BBC Merseyside (18%).

However the performance of key ILR services demonstrated that Marcher Sound has a reach of 12% across the multiplex TSA, comparable with that of Radio 4. The Buzz also scored highly at 11%, with both Dee 106.3 and 107.6 Juice FM reaching 7% indicating that all these local services perform strongly in this market since their analogue footprint is smaller than the overall surveyed area.

92. **Existing services would want to listen to in digital quality**

72% of respondents said they would like to be able to listen to one or other of the existing services in the area in digital quality. Chief among these were:

- BBC Radio Merseyside (31%; already available across a large area of W&C through its carriage on the Liverpool multiplex)
- Buzz 97.1 FM (20%)
- Marcher Sound (19%)

With the exception of BBC Cymru and BBC Wales (scoring 3% and 6% respectively), interest in listening to the remaining services in digital quality scored between 10% and 14%.

The strength of the Buzz 97.1 is of interest since it was measured across an area larger than its existing TSA and suggests that it has strength beyond its current boundaries. However, this service is predominantly a relay of Marcher Sound and could therefore be largely included under that banner.

93. Visual & Audio data requirements

Local news, national news and weather were the three main information types wanted as audio and visual data. Around a third or more would also be interested in traffic and travel news, national sports as well as local sports news.

94. Desire for more functionality

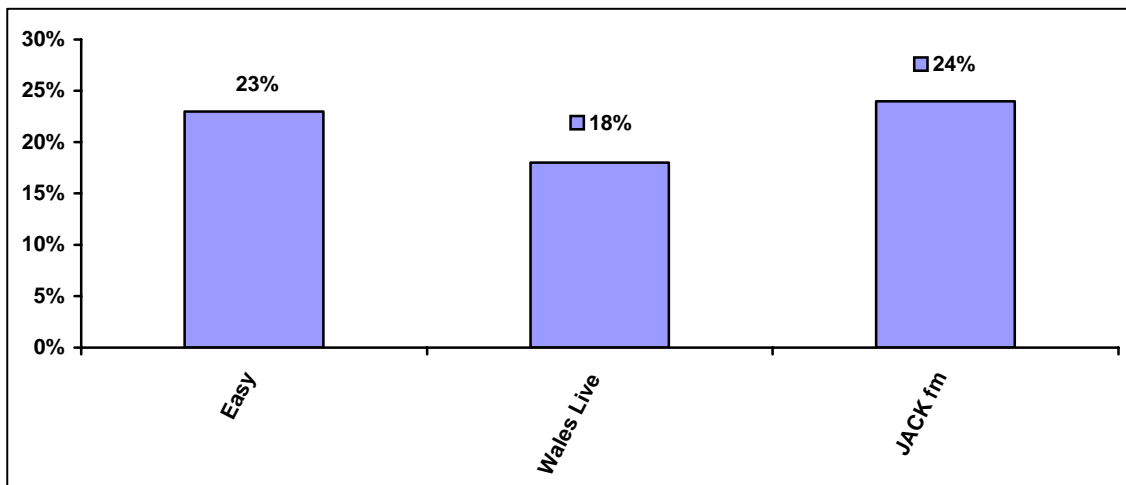
Greater functionality was of interest to 76% of all adults, and 83% amongst current DAB users. The ability to pause, record and rewind programmes particularly captured the imagination of 57% who said they would like to access this.

Four of the remaining six additional services were of interest to around a third or more of all respondents: ability to purchase songs (35%), red button functionality (33%), colour screen showing images, photos or statistics and an electronic programme guide (both 31%).

Non DAB set owners had similar, if not identical views on functionality and this suggests that awareness of these aspects of DAB digital radio might stimulate purchase.

95. Frequency of listening

The chart below shows the weekly reach potential of the new digital only formats selected for the Muxco W&C multiplex.



96. Incorporation of stations into repertoires

The net impact of a new digital multiplex offering a wide range of services would be to increase the amount of time they spent listening to the radio,

97. **Impact on existing stations**

BBC services are most likely to be negatively impacted by the launch of new digital services. It is likely that the new multiplex will have an overall positive impact on the local market with most people saying that more choice would stimulate the amount of time that they spend listening to radio. There is even some suggestion that existing non-listeners to radio may be tempted back with an enhanced local digital line-up.

98. **Estimated share of listening to new multiplex**

If the multiplex became available, in a fully digital world, our research would suggest that it has the opportunity to command a little over 40% of all radio listening.

99. **Overall conclusion on research undertaken**

We are satisfied that our programme of research has successfully met our objectives. It has provided the basis upon which we selected our line up and helped underscore our audience projections in our business plan. It has helped us gain a better understanding of consumer awareness of and attitudes toward DAB digital radio. We were able to quantify interest in our proposed formats from the perspective of the consumers personal tastes as well as from a wider perspective of what would be in the best interests of the population as a whole. We have been able to assess the impact that these services would have collectively as a multiplex offering on the market as a whole. We have been able to demonstrate that our services are demanded, increase choice and would stimulate the purchase of digital radios.

15. Local support

Provide any evidence which has been gathered of local support for the provision of the proposed local radio multiplex service.

Advertisements

100. Our intention to apply for the licence has been documented on our website (www.muxco.com), which has provided an opportunity for prospective applicants to register their interests. We have not advertised our proposals in local newspapers or the trade press, as our experience has identified that during the licence application process, such activity generates little response. Once operational, however, and with greater awareness of the multiplex in the locality, new opportunities will be advertised in the trade press and local newspapers, as well as through the MuxCo website. All local radio services operating within the PPA have been contacted directly.

Consumer Interaction

101. We believe that interest in the complement of services is best measured by the level of support for the services to be broadcast on the multiplex. The breadth of our research has been detailed in Q.14. Through this research, demand for each format has been evaluated, both individually and collectively on the basis of the chosen complement of services. The research studies have also evaluated interest in digital radio and the key drivers for the new technology, over and above pure choice of formats. The research also evaluated stations and formats which listeners wished to see on digital radio. A budget has been set for ongoing general research activity to measure interest in existing and new services, and to assist in the promotion of the medium.

Research

102. We will undertake on-going consumer research. This, in the main, will be undertaken in association with service providers through bodies like RAJAR. Such 'RAJAR' style research will assist service providers to measure audiences and the level of up-take, with obvious benefits to the subscribers. However, there may be times when there is a need to undertake original research, such as to evaluate demand for further potential services or to assess the style and level of content in programmes for contractual reasons. This research may be undertaken through quantitative, focus groups or desk research.

Marketing

103. We will also have a marketing role in generating awareness of digital radio both as a concept and, alongside the service providers, of the complement of services carried on the multiplex.

Internet

104. MuxCo W&C will be served by a multiplex network website at www.muxco.com. Through the site, MuxCo outlines its proposals and plans to apply for local multiplexes and seeks interest from prospective service providers. A copy of this application and further information about MuxCo and the Northeast Wales and West Cheshire multiplex are provided on the site.

In addition, the site will promote DAB Digital Radio, the services offered on each local multiplex, as well as links to other multiplex operators elsewhere in the country. The website will also provide a means of communication between the multiplex and service provider, in particular providing information on transmission issues and fault notices.

Whilst a local multiplex is a virtual company, what is not eliminated is the need to develop a relationship with the listeners about the services it carries. We will want to ensure that we understand the local population, their likes and dislikes, the market gaps and what other services it can provide. Therefore, although there is no wish to have a dialogue with the audience, there is a need to provide a means of access and communication.

Section 51(2)(g): Fair and effective competition

16. Measures taken to ensure fair and effective competition

Detail the measures that have already been taken, and will be taken before and during the licence period, to demonstrate that "in contracting or offering to contract with persons providing digital sound programme services or digital additional services or television licensable content services, the applicant has acted in a manner calculated to ensure fair and effective competition in the provision of those services".

105. Following the advertisement of the new multiplex licence, we contacted the identified analogue licensees (who would qualify for an analogue licence renewal in return for providing a digital programme service on the multiplex) to discuss their digital aspirations and invite expressions of interest in providing programme services. We also contacted companies and organisations who have known digital aspirations or operate digital service elsewhere.

All companies who registered expressions of interest were sent a Service Provider Questionnaire. They were advised that information received would be used alongside research to decide which formats would be included and therefore which service providers would be accommodated in the multiplex application. A summary of all contacts is included in Part B.

Headline terms including approximate carriage costs have been supplied to the proposed service providers.

During the licence period a similar process will be adopted, with a standard questionnaire being used to assess applicants

Fair and Effective Competition during the Licence Period

106. Each service provider will enter a Service Provider Agreement; the key terms of which will be identical for all service providers. All fees charged will be based solely on a 'cost plus' basis, pro-rata to capacity contracted by each service provider. No fees will be related to revenue fees.

We will establish a Service Level Agreement with service providers. This will set out our communications and work policies, especially those relating to planned work and emergency outage notification.

17. Contacts with prospective service providers

Provide a comprehensive list of all prospective providers of digital sound programme services and/or digital additional services and/or television licensable content services with whom the applicant has had contact prior to and during the preparation of this application, at the initiative of either party, and in whatever form. Summarise the nature of the proposals discussed and, for each proposal which is not among those planned for inclusion on the multiplex (as per Q.11 and Q.12 above), state the reason(s) why the prospective provider and/or the service(s) proposed by that provider has not been included.

The response to this question may be submitted in confidence.

107. Our response to this question is submitted in confidence in Part B.

18. Contractual and other arrangements with service providers

For each digital sound programme service provider and/or digital additional service provider and/or television licensable content service provider named in this application:

- a) Supply details of the terms of access, including financial agreements;
- b) To what extent are any or all of these terms of access conditional? Clarify and conditions that exist.
- c) In respect of each named service provider for which details of terms of access are provided, supply a letter from the service provider confirming its agreement with the account of the terms of access provided above, and in particular with the fees it expects to pay.

The response to this question may be submitted in confidence.

108. Our response to this question is submitted in confidence in Part B.

Technical quality

19. Division of multiplex capacity

Show, by means of a pair of clearly-labelled tables, the proposed division of the available multiplex capacity into digital sound programme services and other services during all time periods. The tables should depict the proportion of the total available capacity (in kbits/sec) which it is proposed to allocate individually to each of the digital sound programme services listed in response to Q.11, plus any capacity reserved for expansion, inclusive of any which it is proposed to allocate to digital additional services and television licensable content services.

Please also indicate what proportion of these services will be programme-related (see paragraph 4.35). One of the tables should refer to the capacity units taken by each service (i.e. inclusive of capacity used for error protection), and the other table should refer to the bitrate net of error protection capacity, together with the associated protection level (1 to 5) which it is proposed to use, in accordance with ETS 300 401.

109. The following table details the division of multiplex capacity by kbits between the proposed audio channels, data capacity and EPG, during 3 time periods.

Kbits Allocation	Service Type	UEP	6am to 7pm	7pm to 12pm	12pm to 6am
Marcher Sound	MPEG1L2	UEP3	128	128	128
Classic Gold	MPEG1L2	UEP3	128	128	128
Dee 106.3	MPEG1L2	UEP3	128	128	128
107.6 Juice FM	MPEG1L2	UEP3	128	128	128
BBC Wales	MPEG1L2	UEP3	128	128	128
BBC Cymru	MPEG1L2	UEP3	128	128	128
Easy Radio	MPEG1L2	UEP3	96	96	96
Wales Live	MPEG1L2	UEP3	96	96	96
JACK fm	MPEG1L2	UEP3	96	96	96
Data Capacity	DATA	EEP3A	72	72	72
EPG	EPG	EEP3A	8	8	8
Total			1,136	1,136	1,136
<i>Data as % Total</i>			<i>7%</i>	<i>7%</i>	<i>7%</i>

Additional information is provided in a confidential additional response to this question in Part B.

110. The following table details the division of multiplex capacity by CUs between the proposed audio channels, data capacity and EPG.

CUs Allocation	Service Type	UEP	6am to 7pm	7pm to 12pm	12pm to 6am
Marcher Sound	MPEG1L2	UEP3	96	96	96
Classic Gold	MPEG1L2	UEP3	96	96	96
Dee 106.3	MPEG1L2	UEP3	96	96	96
107.6 Juice FM	MPEG1L2	UEP3	96	96	96
BBC Wales	MPEG1L2	UEP3	96	96	96
BBC Cymru	MPEG1L2	UEP3	96	96	96
Easy Radio	MPEG1L2	UEP3	70	70	70
Wales Live	MPEG1L2	UEP3	70	70	70
JACK fm	MPEG1L2	UEP3	70	70	70
Data Capacity	DATA	EEP3A	54	54	54
EPG	EPG	EEP3A	6	6	6
Total			846	846	846

20. Basis of allocation of multiplex capacity

On what basis have technical decisions on the allocation of multiplex capacity to each of the proposed digital sound programme services been made?

How has the balance been determined between the number of services to be accommodated and the audio quality and robustness of reception which each will enjoy?

111. In allocating capacity between services, the following factors have been taken into account:

- A desire to increase listener choice and to provide a range of value enhancing data services
- A need to provide a reasonable level of sound quality
- To ensure robustness of reception
- The wishes of individual service providers
- The reserved capacity of the BBC

Our aim is to provide each service provider with the ability to broadcast in stereo.

However, for smaller stations and new digital only services, a further decision that service providers need to make is the benefit of broadcasting in stereo, especially during the initial years of digital, versus the financial saving of broadcasting in quality mono. We confirm that the decisions on bit rate were made by each service provider.

Over the course of the licence period, we will work with Ofcom and the service providers in evaluating opportunities for services to broadcast in stereo using lower bit rates.

NGW have evaluated two different audio codecs at various different bitrates. They have found subjective differences that may lead to preferences for use of one codec over another, but dependent on the content and bitrate chosen. MuxCo W&C therefore intends to offer a choice of codecs to our service providers. At low bit rates of 64 kbits or below, we will consider the use of half rate coding at the request of our service providers.

We have chosen an error protection level of UEP 3 as it has been shown through widespread experience to give a good balance between CU allocation on the multiplex and robust reception.

We note that the WorldDMB Forum has now released the DAB⁺ specification. This specification brings with it a significant improvement in spectrum efficiency over the existing standard, but raises a number of migration challenges. We believe that this technology offers an opportunity in the longer term to increase the choice of audio services and enhanced data services on our multiplex. We would like to work with Ofcom to manage the introduction of DAB⁺ services on the W&C multiplex.

21. Audio characteristics

For each local digital sound programme service proposed to be provided, state whether it will be broadcast in 'stereo' or 'mono', and whether it will operate at 'full-rate coding' or 'half-rate coding'. The response to this question should be consistent with the proposed division of multiplex capacity set out in response to Q.20.

	Service Type	Stereo / Mono	Coding	Protection Level	Audio Sampling
Marcher Sound	MPEG1L2	Stereo	Full Rate	UEP3	48kHz UEP3 Stereo
Classic Gold	MPEG1L2	Stereo	Full Rate	UEP3	48kHz UEP3 Stereo
Dee 106.3	MPEG1L2	Stereo	Full Rate	UEP3	48kHz UEP3 Stereo
107.6 Juice FM	MPEG1L2	Stereo	Full Rate	UEP3	48kHz UEP3 Stereo
BBC Wales	MPEG1L2	Stereo	Full Rate	UEP3	48kHz UEP3 Stereo
BBC Cymru	MPEG1L2	Stereo	Full Rate	UEP3	48kHz UEP3 Stereo
Easy Radio	MPEG1L2	Mono	Full Rate	UEP3	48kHz UEP3 Mono
Wales Live	MPEG1L2	Mono	Full Rate	UEP3	48kHz UEP3 Mono
JACK fm	MPEG1L2	Mono	Full Rate	UEP3	48kHz UEP3 Mono

Declaration

Applicants are required to conclude their submission by responding to the following question:

Do you confirm that, to the best of your knowledge and belief:

- a) the applicant is not a disqualified person in relation to the licence by virtue of the provisions of section 143(5) of the Broadcasting Act 1996 (relating to political objects);
- b) no director or person concerned directly or indirectly in the management of the company or the applicant group is the subject of a disqualification order as defined by section 145(1) of the Broadcasting Act 1996;
- c) no person involved in the application has been convicted within the past five years of an unlicensed broadcasting offence and that the applicant will do all it can to ensure that no person so convicted will be concerned in the provision of the service, the making of programmes included in it, or the operation of a radio station if the applicant is granted a licence; and
- d) any matters which might influence Ofcom's judgement as to whether the directors and substantial shareholders involved in the application are fit and proper persons to participate in a radio licence have been made known to Ofcom?

Applicants should note that Ofcom reserves the right to revoke a licence if at any time any material statement made is found to be false and to have been made by the applicant or any member or officer thereof knowing it to be false, and that in the circumstances of section 144 of the Broadcasting Act 1996, the provision of false information or the withholding of relevant information with the intention of misleading Ofcom could incur a criminal conviction and a disqualification from the holding of a licence.

112. MuxCo Northeast Wales and West Cheshire Ltd is not aware of any issues which would prevent the award of a licence to the company.