APPLICATION:
DTT MULTIPLEX
CONTRACT 1

EASY TV

Contents

3.1. Introduction to Applicant

3.1.1.a. Please provide the following details:

(i) Applicant's name, address and contact details

The applicant has not yet been incorporated. If we are successful in our application it is proposed that the contract will be held by **EasyTV**, a limited company to be incorporated in Ireland. For the purposes of providing a contact we have included the proposed shareholders of the Joint Venture.

Name:	**EasyTV**	**EasyTV**
Address:	c/o Conor Hayes	c/o Ray Collins
	RTÉ Commercial Enterprises Limited	Irish Digital (TT) Holdings Limited
	Donnybrook	Riverside One,
		Sir John Rogerson's Quay
	Dublin 4	Dublin 2
Phone:	01 208 4898	01 245 8423
Fax:	01 208 3364	01 245 8534
E-mail:	conor.hayes@rte.ie	rcollins@lgi.com

(ii) Named contact for liaison and correspondence between the BCI and the applicant, and for public purposes

Please refer to 3.1.1. a. (i) above, for the named contacts.

(iii) List of advisers including consultants, auditors, bankers and solicitors

Given the Applicant has not yet been incorporated there has been no appointment of any advisory agency by the Applicant. Should the Applicant be successful in its bid, it is expected the shareholders will appoint suitably qualified external advisors as and when is appropriate.

In this regard it is the intention to appoint Bank of Ireland as Bankers, KPMG as auditors and Arthur Cox as solicitors to **EasyTV**.

The Applicant procured advice for the purpose of the BCI application from the following parties:

KPMG Corporate Finance

Arthur Cox

McCann Fitzgerald

RBB Economics

Booz Allen Hamilton

(iv) Where the application is conditional (i.e. linked to other application(s)), a numerical reference confirming that it is part of a set (e.g. if an applicant had three linked applications, they should be labelled 1 of 3, 2 of 3 and 3 of 3 respectively).

1 of 3. This application is conditional on the Applicant being awarded all 3 DTT television multiplex contracts.

3.2. Summary of Application

EasyTV Limited ("**EasyTV**") is a new independent company, specifically created to build, operate and maintain a high quality Digital Terrestrial TV (DTT) service across Ireland. The Sponsors behind **EasyTV** are RTÉ Commercial Enterprises Limited, a wholly owned subsidiary of RTÉ, and Irish Digital (TT) Holdings Limited (IDTTH) an indirect wholly owned subsidiary of Liberty Global, Inc.

The unrivalled expertise of its Sponsors allows **EasyTV** to be confident that it has specified the optimum DTT solution in terms of maximising the capabilities of the 4 Multiplexes available; ensuring the fastest possible speed to market; minimising any potential technology risks; building a business model that is commercially viable and ensuring the consumer has the best possible experience from their move to DTT.

EasyTV intends to offer a compelling value for money proposition unique in the Irish marketplace. It will combine a rich programming offer that will more than satisfy the majority of consumers viewing requirements combined with the latest in technology developments (HD, DVR, Interactivity) all at unparalleled low prices:

- "Soft Pay" up to 60% cheaper than prevailing offers
- "Mid Pay" up to one third cheaper than prevailing offers

EasyTV is bidding for all three Multiplexes on offer so that it can offer consumers a seamless integrated service combining up to 35 Digital Channels on the three commercial multiplexes with the programming on the public service multiplex. Content will be balanced across a broad range of genres including the most popular General Entertainment, News, Documentaries, Music and Sports programming. The overall packaging and proposition is tailored to address the demographic profile of the core target markets.

EasyTV will commence the rollout of its Digital TV service starting in Q3/2009 with an initial footprint of 85%. Initial focus will be large urban centres including the main cities in the east coast to Waterford, Cork City, and the Midlands as these will be the first to have a disintegrated analogue service as UK analogue is switched off. At the time of analogue switch off in Ireland, the **EasyTV** footprint would cover 93% of the population of Ireland.

EasyTV will ensure the availability of digital receivers nationally by specifying, procuring and financially supporting the development and distribution of a range of STBs and DVRs that fully match BCI requirements. **EasyTV** will also encourage the development of a competitive horizontal market for supply of set top receivers and integrated digital TV receivers that meet the functionality requirements as defined by BCI and will fully support the use of third party STBs with a slot-in **EasyTV** CA module (supporting the latest CA+ standard). **EasyTV** will facilitate the seeding of receivers for FTA consumers to support the wider BCI objective of promoting the DTT platform.

EasyTV will operate on a common platform with the operation of MUX 1 by RTÉ and will support the latest developments in assisted access services including both the Broadcast EPG and the specification of the STB models promoted by **EasyTV**.

EasyTV will participate with RTÉ in the development and on-going management of a common EPG covering all FTA and pay channels. This enhanced EPG will have the same look and feel on all receivers; it will be fast and efficient; offer enhanced features such as programme by genre and DVR series linking, picture-in-picture support and other leading edge capabilities.

EasyTV will be a stand alone operation and have its own independent management team who will be fully responsible for programme acquisition, sales and marketing of the product, customer operations and managing the outsourced service providers.

EasyTV will work with a number of carefully chosen partners that are leaders in their own respective fields i.e.

UPC Broadband for Service Delivery, Local IT, Encryption & CA Services; **RTÉNL** for Transmission Distribution & Multiplexing Services; **Osmosis** for STB and Smartcard Distribution and Fulfillment Services; **Rigney Dolphin** for Telesales and Customer Support Services.

EasyTV will benefit from the unmatched skill, experience and commitment of its Sponsors, RTÉ, the national public service broadcaster in Ireland, and Liberty Global, one of the largest global Pay TV providers. Key benefits will include:

- Ability to define, implement, market and execute a successful Pay-TV strategy

- Leverage of the UPC broadband digital TV laboratories and research

- Seamless integration with the public service multiplex so it is one service to the consumer

- Ability to specify and procure STB and DVRs from leading manufacturers

- Expertise in the design and implementation of easy to use but feature rich applications

- Experience of operating all aspects of essential Pay-TV back office IT systems

- Long term commitment to the provision of TV services in Ireland

Subject to award of contract, and any EU and Ireland regulatory approvals, there are no other arrangements that need to be put in place before **EasyTV** could accept a contract.

3.3. 9(2)(a)

The character of the applicant or, if the applicant is a body corporate, the character of the body and its directors, manager, secretary or other similar officer and its members and the persons entitled to the beneficial ownership of its shares.

Applicants are required to provide, with reference to the requirements set out below, full details of the identity and current status of the entity submitting the application, its managers and its owners. Further information regarding the expertise, experience and the financial resources of the applicant are addressed in 9(2)(b) below.

Applicants are also required to bring to the BCI's attention any information that may influence the Commission's opinion regarding their suitability to hold a multiplex contract.

3.3.1. Entity

3.3.1.a. What is the identity of the applicant? (Please include the names of all participants in the application, state when the applicant was formed and describe the history of the applicant to-date.)

The applicant is **EasyTV** (to be incorporated, see below). It will be an Irish limited liability company. Its shareholders shall be RTÉ Commercial Enterprises Limited and Irish Digital (TT) Holdings Limited ("IDTTH"). If this application for the BCI multiplex contracts is successful, **EasyTV** will be incorporated thereafter for the purposes of owning and operating the platform.

RTÉ Commercial Enterprises Limited, a limited company registered in Ireland under company registration number 155076 and having its place of business at Donnybrook, Dublin 4. RTÉ Commercial Enterprises Limited was incorporated in 1990. It provides free, web-based on-line services broadly aimed at Irish Audiences, produces and publishes the RTÉ Guide, provides the Aertel teletext service, engages in a number of media related commercial activities including, programme merchandising sales, sale of library and archive material, IVR/SMS telecoms revenue share, studio production of television and radio advertisements, hire of radio production facilities, mobile radio studio and sponsorship sale, sale of on-line banner advertising and sponsorship, sale of teletext advertising and sponsorship.

RTÉ Commercial Enterprises Limited is a wholly owned subsidiary of Radio Telefís Éireann (RTÉ). RTÉ was established as a statutory corporation under the Broadcasting Authority Act, 1960 as the Irish public service broadcaster. RTÉ operates the public service television channels RTÉ One and RTÉ Two, and the public service radio channels RTÉ Radio 1, RTÉ 2 fm, RTÉ lyric fm and RTÉ Raidío na Gaeltachta. It also operates the RTÉ National Symphony Orchestra and the RTÉ Concert Orchestra. Its principal subsidiaries are RTÉ Commercial Enterprises Limited (see above) and RTÉ Transmission Network Limited. RTÉ Transmission Network Limited operates a national broadcast transmission network within the State, which it makes available to both local and national broadcasters, including RTÉ's own services on

an arms length basis. RTÉ Transmission Network Limited also rents surplus tower/mast space to a variety of third party non-broadcast users.

IDTTH, an Irish limited liability company, with its registered address at Riverside One, Sir John Rogerson's Quay, Dublin 2; this is a newly incorporated subsidiary of LGI Ventures BV (see below) formed for the sole purpose of holding LGI Ventures BV's interest in **EasyTV.**

LGI Ventures BV ("LGIV"), a limited liability company incorporated under the laws of the Netherlands, with its registered address at 53 Boeing Avenue, 1119 PE Schiphol-Rijk, the Netherlands. It is an indirect wholly owned subsidiary of Liberty Global, Inc ("LGI"), and is primarily a vehicle through which LGI owns a variety of minority joint venture investments (including, for example, 35.5% of City Channel Limited, an Irish local broadcaster). LGI is a publicly listed (NASDAQ) corporation. Further details can be found at www.lgi.com or www.sec.org.

3.3.1.b. What is your current legal status? If you are not currently a legal entity and if your application were successful, who would hold the contract?

The applicant entity has not yet been incorporated. If the bid is successful it will be incorporated and the contract will be held by **EasyTV.**

Where the applicant is already a corporate body, please provide a copy of the certificate of incorporation, the registered address and CRO number of the applicant.

EasyTV is currently under incorporation therefore it does not currently have a registered address or CRO number.

3.3.1.c. If this application is conditional, i.e. it is linked to one or more other applications, what is the relationship between the respective applicants? Please provide details of any arrangement that exists between the applicants.

This application is conditional on **EasyTV** being awarded all three BCI commercial multiplex contracts. If successful in its application for all three contracts, **EasyTV** would be the contracting party with the BCI in all instances. The legal entity for **EasyTV** and its shareholders will be the same for all three applications.

3.3.2. Management

3.3.2.a. Who are the members of the board of directors (or equivalent) of the applicant? (For each person please provide their name, address, age, nationality and current occupation)

Upon incorporation, the directors of **EasyTV** will be:

- Conor Hayes, of 14 Temple Villas, Palmerston Road, Rathmines, Dublin 6, aged 53 years, Irish, Chief Financial Officer, RTÉ and a director of RTÉ Commercial Enterprises Limited.

- Tom Quinn, of 136 Stillorgan Road, Donnybrook, Dublin 4, aged 61 years, Irish, Secretary to the RTÉ Authority and a director of RTÉ Commercial Enterprises Limited.

- Shane O'Neill of House VI, Torca Road, Dalkey, Co Dublin, aged 47, Irish, Chief Strategy Officer of Liberty Global and President of Chellomedia.

- Ray Collins, of 37 Bath Avenue, Sandymount, Dublin 4, aged 35, Irish, Director of Strategy and Corporate Development within Liberty Global and a director of Irish Digital (TT) Holdings Limited

3.3.2.b. Which of the directors is the chairperson (or its equivalent)?

It is expected that the directors (as set out above) will choose an independent chairperson of experience and integrity with the requisite stature and having no business connection with RTÉ and Liberty Global.

3.3.2.c. Who is the managing director or senior executive officer of the applicant (please provide name, address, age, nationality and current occupation of this person)?

No specific individuals have been identified at this stage. It is the intention of **EasyTV** to recruit the best possible candidates for these key positions from across the industry by advertising both nationally and internationally. This will only be done in the event that the contract had been awarded.

3.3.2.d. Who is the secretary or similar officer of the applicant (please provide name, address, age, nationality and current occupation of this person)?

Bradwell Limited, an Arthur Cox company secretarial company, with registered address at Arthur Cox Building, Earlsfort Centre, Earlsfort Terrace, Dublin 2.

Details of the experience and expertise of the managers should be provided in section 3.4.1

3.3.3. Shareholding/Beneficial Ownership of Shares

3.3.3.a. What is the existing or proposed shareholding structure of the applicant? (Please specify the total number of authorised shares, the total issued share capital, and the class/classes of shares.)

The company will have an authorised share capital of €20 million and an issued share capital of €10 million in a single class of ordinary shares.

It is proposed that **EasyTV Limited**, when incorporated, will have one class of ordinary shares which will be held in equal numbers by each of RTÉ and IDTTH.

3.3.3.b. Who are the owners or proposed owners of all of the shares in the applicant and/or the persons entitled to the beneficial ownership of the shares where a shareholding is in the name of a trustee or nominee? (Please provide, in respect of each such person, his/her name and home address. Where a shareholder of the applicant is a body corporate, please provide the names and addresses of the shareholders and/or person(s) entitled to the beneficial ownership of the shares, and specify the percentage that each shareholding represents of the total issued share capital of the body corporate.

The companies below will together be both the legal and beneficial owners of the entire issued share capital of **EasyTV Limited**:

- RTÉ Commercial Enterprises Limited, a limited company registered in Ireland under company registration number 155076 and having its place of business at Donnybrook,

Dublin 4. RTÉ, Donnybrook, Dublin 4. RTÉ holds 49,999 shares RTÉ Commercial Enterprises Limited and one share is held by Tom Quinn in trust for RTÉ.

- Irish Digital (TT) Holdings Limited, an Irish limited liability company, with its registered address at Riverside One, Sir John Rogerson's Quay, Dublin 2. The ultimate beneficial owners of IDTTH are the shareholders of LGI.

3.3.3.c. What is the existing or proposed shareholding (per class where relevant) and the issue price subscribed by each shareholder (including details of any premium paid), and the percentage that each shareholding represents of the total issued share capital of the applicant?

€5 million in ordinary shares of €1 each representing 50% of the issued share capital RTÉ Commercial Enterprises Limited, herein after refered to as RTÉCEL

€5 million in ordinary shares of €1 each representing 50% of the issued share capital Irish Digital (TT) Holdings Limited, herin after refered to as IDTTH

The shares will carry equal voting rights, dividend rights and distribution rights on a winding up of **EasyTV**.

3.3.3.d. What percentage of all the votes that may be cast by the shareholders of the applicant at general meetings is attached to each shareholding?

- 50% RTÉCEL
- 50% IDTTH

3.3.3.e. What is the total value of loan stock and the existing or proposed amount of loan stock subscribed by each shareholder?

RTÉCEL and IDTTH shall each contribute up to €7.5 million in the form of preference shares, loan stock or capital contribution as appropriate.

3.3.3.f. Where there is a shareholders', or other, agreement/s in existence or proposed in respect of the applicant, please provide details of the provisions of such agreement/s relating to the ownership and/or control of the applicant i.e. board of directors, transfer of shares, pre-emption rights, additional rights conferred by share class, exit mechanisms and conditions envisaged etc.

Details of the rights attaching to the shares in **EasyTV** are as set out in the Shareholders' Agreement which is enclosed. The Shareholders' Agreement governs the relations of the Parties with regard to **EasyTV**, enclosed in Appendix C.

This binding agreement is conditional on various matters, including the incorporation of **EasyTV**, and receipt of appropriate third party approvals, including merger clearance.

The Shareholders' Agreement will include, among other things, provisions on the management structure and procedures applicable to **EasyTV**, matters requiring the consent, limitation provisions on the transfer of participating interests in **EasyTV**, funding of **EasyTV**,

dividend policy, exit conditions and procedures, dispute resolution and (if applicable) deadlock provisions.

The Parties have agreed to a "lock-up" on their shares for a 5 year period and "offer round" provisions thereafter.

The Board of Directors of **EasyTV** shall comprise two directors nominated by each Party and an independent chairperson chosen by the Board.

Each Party will have a veto right in respect of (inter alia) the following categories of decision:

- Agreeing or amending the Annual Budget or Business Plan

- Amendment or extension of the Business

- Appointing and terminating the appointment of any employees having a salary in excess of €50,000

- Entering or terminating Material Contracts

- Initiation, settlement or non-settlement of Material Litigation

- Initiation, compromise or discontinuance of any contact with a national or supranational authority, regulator, Minister, department, court, tribunal or public or statutory body with the power and competence to make decisions, awards, rulings or judgments in relation to the Business or the business carried on by the Shareholders or their Affiliates from time to time

- The incurrence of debt in excess of €50,000 or the creation of encumbrances over any assets of the Company

- The appointment of the chairperson of the Company in accordance with Clause 6.6 (Appointment of Directors)

- Agreeing any amendment to the terms on which BCI appoints the Company as contractor (as defined in Section 4(2) of the Act) in respect of the multiplex contracts

- The appointment or removal of the Chief Executive Officer of the Company (if any) and the Chief Financial Officer of the Company

- The appointment or removal of the auditors of the Company

- The approval of financial statements

- The making of changes to accounting policies of the Company

- The making or declaring of dividend

- The creation or winding-up of any subsidiaries of the Company

- Any transactions with the Shareholders

- The making or repaying of any shareholder loans

Full details of an applicant's financial resources are provided in section 3.4.2.

3.3.4. Additional Information

Please answer the following questions "yes" or "no", on behalf of the applicant, to include, if the applicant is a body corporate, its directors, manager, secretary or other similar officer and "significant" shareholders. A person will be deemed to be a "significant" shareholder if s/he is the legal or beneficial owner of shares in the applicant to which are attached ten percent (10%) or more of the voting rights exercisable at a general meeting of the applicant. If the answer is "yes" to any of the following questions, please provide full details.

3.3.4.a. Has the applicant ever been convicted of an offence involving fraud or dishonesty?

No.

3.3.4.b. Has the applicant ever been restricted or disqualified as a Company Director, or convicted of any offence under the Companies Acts 1963-2006 (as amended) in this jurisdiction or under equivalent legislation in any other jurisdiction?

No.

3.3.4.c. Has the applicant ever been adjudicated a bankrupt, become insolvent or entered into a voluntary arrangement with creditors, or had a receiver appointed to any of his assets, in this or any other jurisdiction?

Shane O'Neill was a director of United Pan-Europe Communications NV, which in early 2002 entered into a financial restructuring in the Netherlands and the United States of America involving court-related proceedings: a debt moratorium in the Netherlands and a Chapter 11 in the US, since successfully concluded.

3.3.4.d. Has the applicant ever been a director of a company to which a receiver was appointed, which went into compulsory liquidation, creditors' voluntary liquidation, examinership or which made any arrangement with its creditors or class of creditors?

Shane O'Neill was a director of United Pan-Europe Communications NV, which in early 2002 entered into a financial restructuring in the Netherlands and the United States of America involving court-related proceedings: a debt moratorium in the Netherlands and a Chapter 11 in the US, since successfully concluded.

3.3.4.e. Has the applicant ever been convicted of an offence under any legislation by which Broadcasting and/or Wireless Telegraphy is regulated in this or any other jurisdiction?

No.

3.3.4.f. Has the applicant ever had a licence or contract issued by a broadcasting licensing body or any other statutory body suspended or revoked in this or any other jurisdiction?

No.

3.3.4.g. Is the applicant aware of any reason why it may not be a fit and proper person to be awarded a contract?

No.

3.4. 9(2)(b)

The adequacy of the expertise and experience and of the financial resources that will be available to each applicant and the extent to which the application accords with good economic principles

For ease of reference, this criterion will be assessed in two parts:

  • Expertise and experience available; and

  • Adequacy of the available financial resources and accordance with good economic principles

3.4.1. Part 1 – Expertise and Experience Available

Applicants are required to demonstrate the level of expertise and experience that will be available during the establishment and operation of the business by addressing the following questions:

3.4.1.a. Please provide in diagrammatic form the organisational structure (including the management structure) for delivering the proposed service. Please include estimated staff numbers, categories and location of staff and indicate whether these staff will be employed by the multiplex contractor or by sub-contractors?

EasyTV will employ staff directly in the areas of General Management, Sales, Marketing and Finance. The organisational chart below shows a directly employed headcount of 21 (of which 4 will be managerial level) based in Dublin.

All operational functions will be outsourced to agencies which have sufficient resources and the flexibility to vary headcounts working on **EasyTV** related activity depending on demand. **EasyTV** will have service level agreements with the outsourcing agencies which stipulate service availability, response times and other delivery outcomes rather than specific headcounts. The outsourced agencies will employ all staff working on **EasyTV** service contracts and these staff will be based in Ireland.
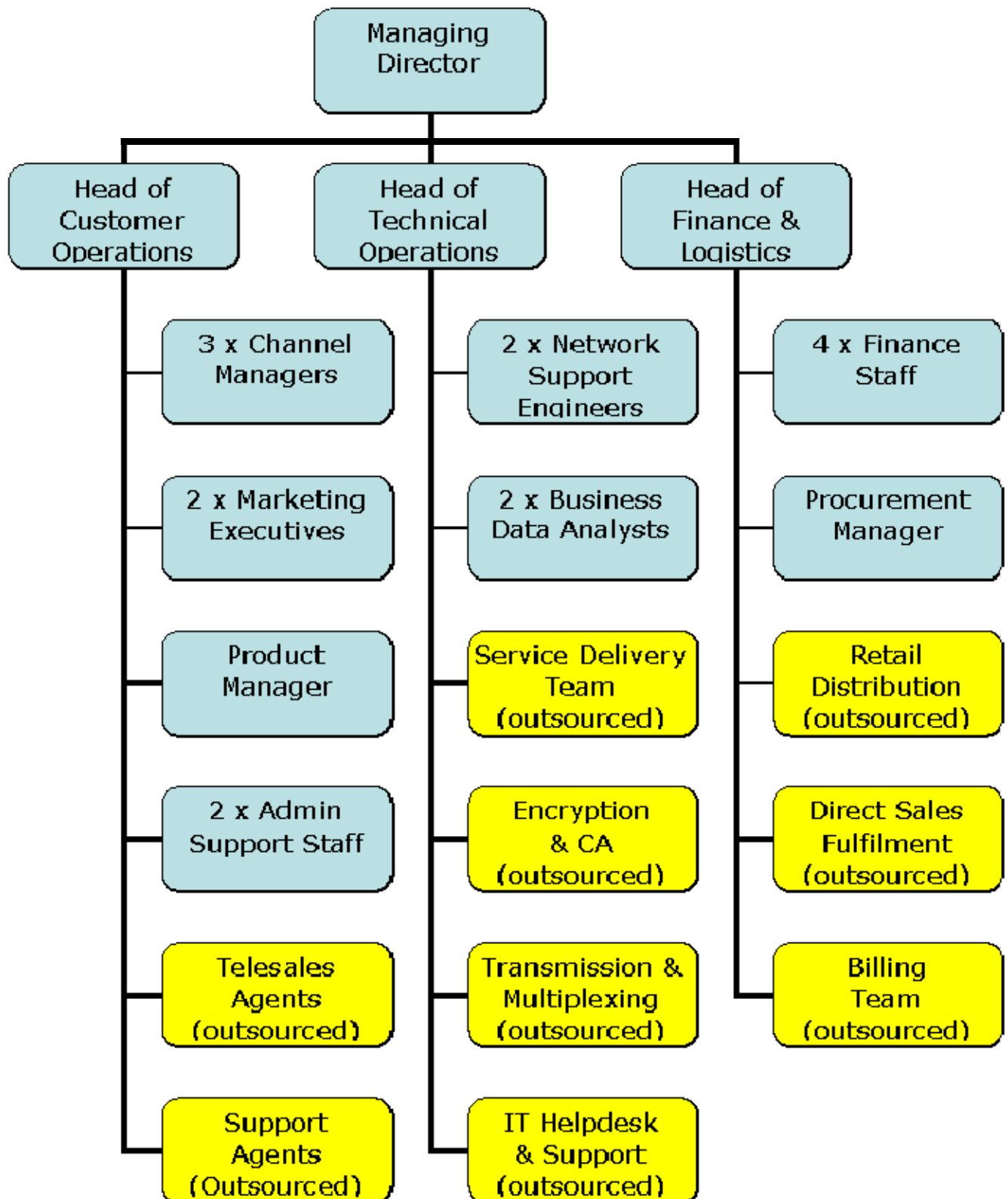
3.4.1.b. To what extent have individuals been identified for key posts? Where relevant, please provide details of such individuals as follows: name, home address, age, qualifications.

No specific individuals have been identified at this stage. It is the intention of **EasyTV** to recruit the best possible candidates for these key positions from across the industry by advertising both nationally and internationally. This will only be done in the event that the contract is awarded.   However the joint venture partners would second experienced managers to these positions, to cover the short period before the selected individuals could be recruited and appointed, thereby ensuring that there was no delay in getting the company operational.

3.4.1.c. What are the background, expertise, experience and track record of the following, highlighting the relevance to the proposed operation:

(i) Each member of the board of directors, or equivalent, of the applicant

SHANE O'NEILL is Chief Strategy Officer, Liberty Global and President of Chellomedia. As Chief Strategy Officer of Liberty Global, Shane O'Neill oversees the company's strategic planning, mergers and acquisitions and corporate development activities. In addition, Shane is responsible for the development of Chellomedia, Liberty Global's European based TV and Media division.

Shane joined Liberty Global in 1999 as Managing Director of Corporate Development and Mergers & Acquisitions. He was appointed to his present position in April 2002 and January 2003 respectively. During his tenure, he has been instrumental in determining and executing the strategy that has resulted in the highly-successful turnaround of UPC Broadband which comprises Liberty Global's core European cable businesses.

From 1997 to 1999, Shane was an Executive Director in the Advisory Group for Goldman Sachs in London where he was responsible for providing advice on mergers and acquisitions as well as corporate finance to a number of companies in the media and communications industry, including UPC. Prior to this, Shane worked at Goldman Sachs in its New York, Sydney and London offices.

Before joining Goldman Sachs, Shane spent four years at Macquarie Bank in Sydney and three years at KPMG in Dublin where he qualified as a Chartered Accountant. He received a Law degree from Trinity College, Dublin.

Shane is a member of the board of the National Treasury Management Agency of Ireland and is an advisor to INSEAD's Media and Technology Board**.**

RAY COLLINS is Director of Strategy and Corporate Development within Liberty Global. Ray's responsibilities include the formulation of group and country strategies, new market and product assessment, mergers and acquisitions and long range financial planning. Ray joined Chellomedia, a subsidiary of Liberty Global, in 1998 as a manager of strategy and corporate development. From 1992 to 1998 Ray held a number of financial planning and accounting positions spanning Telecoms, Aerospace and Publishing industries. Ray qualified as a member of the Chartered Institute of Management Accountants (CIMA) in 1995. Ray is also a director of City Channel Ltd in Ireland.

CONOR HAYES is RTÉ's Chief Financial Officer and a director of RTÉ Commercial Enterprises Limited and of RTÉ Transmission Network Limited. He is a member of the Executive Board of RTÉ. In addition to his role as Chief Financial Officer, he oversees RTÉNL, RTÉ Publishing, Group IT & Technology and Property and Services. He is Chairman of the Trustees of the RTÉ Superannuation Scheme. He holds a B.Comm degree from UCD (1976), is a member of the Institute of Corporate Treasurers in the UK (1989) and is also a Fellow of the Institute of Chartered Accountants in Ireland (1979).   Conor has extensive general, commercial, operational and financial management experience and has previously held

several senior management positions covering a wide variety of management functions and industry sectors including:

- Deputy Chairman, Cara Treasury Group - Private Equity, IT & Services

- Executive Director, Pleroma Group - Food, Software & Logistics

- Chief Executive, JetPhone - Passenger Mobile Communications

- Chief Executive, Ryanair - Airline Transport

- Chief Financial Officer, Almarai Group - Integrated Dairy Foods

- Manager, Stokes Kennedy Crowley (KPMG) Corporate Finance - Financial Services

TOM QUINN is Secretary to the RTÉ Authority, Director and Company Secretary of RTÉ Commercial Enterprises Limited and RTÉ Transmission Network Limited. He is a Director of Telegael Teo and Irish Blind Sports Limited. He was formerly Chairman of Radio Tara Limited (Atlantic 252) and RTÉ Representative on Comhairle Theilifís na Gaeilge, 1994 – 2004. He is the RTÉ Shareholder Representative with Euronews and a Trustee of the RTÉ Benevolent Society. He is a Barrister-at-Law; Chartered Fellow Chartered Institute of Personnel and Development; B.A., Dip. Soc. Sc., Dip. Eur. Law; Dip.Corporate Governance and a founder member of the Corporate Governance Association of Ireland. He joined RTÉ's Staff Relations Department in 1969 and other positions held in RTÉ were Staff Relations Executive, Job Evaluation Manager, News Administration Manager and Director of Corporate Affairs/Secretary.

(ii) Key members of the management team

Although no specific individuals have been selected for key roles (see 3.4.1.b above) the responsibilities of each of these roles have been identified and the required attributes of the candidates to be sought for the positions are as follows:

Managing Director

a) Responsibilities

- Working closely with the Board of Directors to establish and execute a strategic plan for the future success of the company

- Establishing, developing, motivating and leading a robust management team and structure

- Negotiating with outsourcing suppliers to finalise contracts and define service level agreements

- Managing all day-to-day operations of the business such as Sales, Marketing, HR, Finance, Legal, Customer Services, IT and Service Delivery

- Represent commercial DTT in Ireland in terms of the media, the industry and Government Agencies (e.g. BCI, Comreg etc.)

- Liaising with company advisors on matters of regulation, law, banking and finance with accountability and full P&L responsibility of the business

- Reporting back to the board of directors and external shareholders in an appropriate and timely manner on the performance of the company

- Where appropriate, securing shareholder approval of matters requiring shareholder approval

Managing Director

b) Attributes

- Good understanding of the Pay-TV market in Ireland linked to an ability to plan and mobilise an expansive strategy for growth

- Good understanding of all aspects of the business and operational support systems under-pining a Pay-TV service linked to an ability to scope and oversee the delivery of such systems in a timely and integrated manner

- Financially literate with the ability to interpret a full set of accounts and P&L with previous responsibility for bottom line in an independent company with external shareholders

- Degree educated preferably to MBA level or equivalent and at least 5 years experience in the last 10 years at senior management or director level within the IT/Telecoms/Media industry

- Excellent people management and communication skills and previous experience of managing an early stage company with at least 50 reports (direct and non-direct)

- Entrepreneurial background with experience of growing early stage businesses and creating shareholder value

- Commercially astute individual able to successfully manage complex negotiations with suppliers and public sector bodies

Head of Customer Operations

a) Responsibilities

- To Develop and maintain marketing strategies to meet agreed company objectives

- To evaluate customer research, market conditions, competitor data and implement marketing plan alterations as needed

- To oversee all marketing, advertising and promotional staff and activities

- Responsible for the marketing of company products and services to the market

- Budget management - to deliver all marketing activity within the agreed budget

- To manage all aspects of print production, receipt and distribution

- To achieve frequent, timely and positive media coverage across all available media

- To managing the entire product line life cycle from strategic planning to tactical activities

- To conduct market research in order to identify market requirements for current and future products

- To develop and implement a company-wide plan to push product, working with all departments for its execution

- Manage relationship with outsourced telesales and customer services agencies

Head of Customer Operations

b) Attributes

- Demonstrate technical marketing skills and company product knowledge

- Approximately 4-6 years of indirect/channel sales experience in the marketing industry

- At least 2 years experience with a consumer focused company in IT/Telecoms/Media sector

- Good people management and communication skills and previous man management experience in an IT/Telecoms/Media company with at least 10 reports (direct and non-direct)

- Extensive experience of developing, maintaining and delivering on marketing strategies to meet company objectives

- A strong understanding of the Pay-TV customer and market dynamics and requirements in Ireland

- A proven ability to oversee all marketing, advertising and promotional staff and activities of substantial value and complexity

Head of Technical Operations

a) Responsibilities

- Day to day management and monitoring of outsourced OSS/BSS service contract

- Day to day management and monitoring of outsourced Transmission, Multiplexing and Encryption service contracts

- Day to day management and monitoring of outsourced IT Helpdesk and Support Services contracts

- Providing expert advice and support to rest of business in all aspects of Pay-TV related technology issues

- Provision of Data Analysis service to other departments within organisation

Head of Technical Operations

b) Attributes

- In-depth understanding of the technology and support systems involved in operating a Pay-TV platform

- Educated to degree level in Computing and/or Engineering disciplines with 5 years technical experience within the IT/Telecom/Media sector

- At least 2 years operational management experience within a Pay-TV company

- Good people management and communication skills and previous man management experience in an IT/Telecoms/Media company with at least 10 reports (direct and non-direct)

- A proven ability to manage multiple outsourced IT service contracts of substantial value and complexity

Head of Finance & Logistics

a) Responsibilities

- Support for the effective financial management of **EasyTV**

- Production of regular financial reports for management

- Preparation of full year budget and financial forecasts

- Analysis and review of key business indicators

- Development of commercial models and business plans associated with new products and other business developments

- Development and implementation of effective systems of internal financial control

- Effective management of all procurement

- Overall responsibility for management and monitoring of outsourced retail distribution and order fulfilment contracts

- Management of all aspects of company tax compliance

- Management of company treasury position

- Year end audit and statutory accounts compliance

Head of Finance & Logistics

b) Attributes

- Previous senior financial management level experience in a commercial environment preferably with responsibility for supplier / customer contracts & negotiations

- Experience of working in a fast / high volume / service oriented business

- Analytical and reporting abilities and experience

- Experience in managing procurement function and outsourced service contracts

- Strong commercial awareness, experience of working with line management and of integrating financial matters with operational matters

- Graduate or equivalent with appropriate professional qualification ACA, ACCA, CIMA

- Effective communication skills, both written and oral

- Strong organisational and project management skills

3.4.1.d. Comment on the adequacy of the combined expertise and experience of participants, of the above persons in the context of the award of a DTT multiplex contract.

The combined expertise of the Applicants, through the Liberty Global group of companies and RTÉ is unmatched in terms of their:

- knowledge of the PSB and Pay-TV market in Ireland

- understanding of digital TV technology and related standards

- ability to specify and procure STB and DVRs from leading manufacturers

- contacts with channel/programme providers both nationally and internationally

- expertise in the design and implementation of easy to use but feature rich EPGs

- ability to define and execute a Pay-TV sales & marketing strategy within Ireland

- experience of operating all aspects of essential Pay-TV OSS/BSS systems

This unrivalled expertise allows **EasyTV** to be confident that it has specified the optimum DTT solution in terms of maximising the capabilities of the 4 MUX's available; ensuring the fastest possible speed to market; minimising any potential technology risks; building a business model that is commercially viable and ensuring the consumer has the best possible experience from their move to DTT.

EasyTV has specified, based on direct experience in operating Pay-TV platforms, the key attributes required for each of the senior management positions that are required to ensure the success of the new DTT operator. Such a strong management team, combined with the many years of broadcasting and Pay-TV experience within the Board of Directors, will ensure that company is best able to guarantee success during the initial start-up phase and rapid growth to maturity over the next 5 years.

3.4.1.e. In the event of out-sourcing/sub-contracting of any key aspect of the proposed service, where appropriate please indicate the proposed provider of the service, together with details of key personnel identified to support the multiplex contractor and information on their qualifications, expertise and experience.

The **EasyTV** value chain and the role of the key subcontractors is as follows
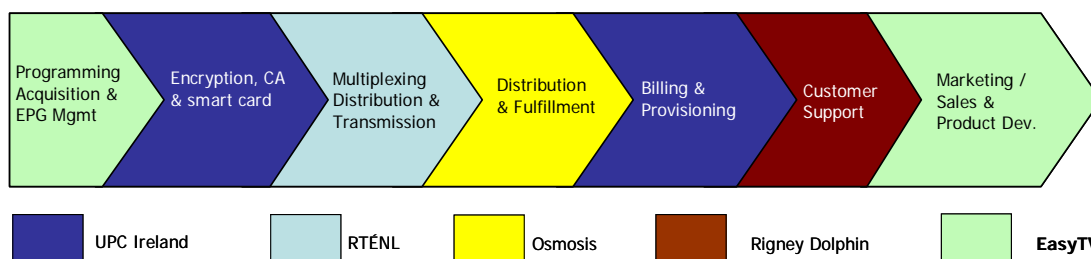
Service Delivery, Local IT, Encryption & CA Services

EasyTV proposes to outsource Key IT and Encryption activities to UPC Ireland and UPC Broadband. These are both group companies of the Liberty Global Group. UPC Ireland comprises of the business of NTL Communications (Ireland) Ltd, ("NTL") and Chorus Communications Ltd, ("Chorus"). UPC Broadband is the name give to the group of European broadband communications companies operated by Liberty Global of which UPC Ireland is one such company. Specific Service Level Agreements (SLAs) will be put in place to manage the relationship and ensure adequate arms-length agreements are provided between the **EasyTV** and these entities.

UPC Broadband plans to provide a Customer Care and Billing platform which has full and proven inter operability to the provisioning elements of Digital Headends. This solution is known as the Derby Platform and consists of the following key components which are fully integrated to support the customer care, billing and product activation requirements of the Digital Television product:

- Clarify CRM

- Vitria Middleware (Enterprise Application Interfacing Component)

- Kenan Billing Engine

- Oracle Metasolv ASAP provisioning engine

A separate instance of the key Derby Platform components will be configured for the sole purpose of **EasyTV**. This will be hosted in the UPC Broadband Data Centre which is based in the Netherlands. This platform will allow for full end to end management of a DTT customer and will also support the provision of wholesale facilities.

UPC Broadband (CTO) will provide an Encryption platform which has full and proven inter operability to the provisioning elements of the IT systems and STB equipment located at the customer premise.

The encryption platform will be configured and segregated for the sole purpose of **EasyTV** and will be hosted in the UPC Ireland's Data Centre which is based in Dublin. They will interface upstream to the key IT systems hosted at the UPC Broadband Data Centre located in the Netherlands, and downstream to the DTT multiplexing centre also located in Dublin. UPC Ireland will leverage its existing contractual relationship with Nagra to provide a back to back SLA for second and third line support of this platform.

UPC Ireland will provide local IT Services infrastructure for **EasyTV**. These services will deal with IT LAN / WAN Management, Voice and Data Requirements, Server and Desktop management, File – Print - Mail and IT Helpdesk Services.

The local encryption service infrastructure of **EasyTV** will be provided through an agreement with the UPC Ireland operating division. These services will deal with the day to day operational management of the core encryption platforms.

It is proposed to leverage the existing infrastructure and expertise available to the **EasyTV** through its access to UPC Ireland resources in this area.

Service Level Agreement (SLA)

The SLA that will be put in place by **EasyTV** with UPC Broadband will describe the services that will be provided to **EasyTV** as well as parameters and service level indicators agreed for service management and control. A three layer SLA structure will be adopted:

- **General SLA, Company Level -** The SLA at this level covers general issues that apply to most IT Services delivered to **EasyTV**.

- **Business Process Level -** This will cover all SLA issues relevant to the particular customer group responsible for a business process. Specific roles, responsibilities and procedures are described at this level.

- **Service Specific Level** - This will cover all SLA issues relevant to the specific service (e.g. execution of bill runs). This SLA will include an overview of the level of specified service parameters for the service in question.

All SLAs will clearly identify the responsibilities of the service provider and **EasyTV**.

UPC Broadband SLA Responsibilities

- Deliver the service according to the SLA

- Assign a Service Assurance Manger for **EasyTV** to discuss and agree all SLA matters

- Report service performance on delivered services under SLA

- Provide technical management for IT Services in scope

- Assign a single point of contact in case **EasyTV** has questions regarding support

- Provide access to and create the necessary queues on the existing trouble ticketing tool so **EasyTV** can raise a ticket when a disruption of service occurs

- Provide regular updates on raised tickets via the trouble ticketing tool

- Respond to tickets in line with the SLA

- Deliver solutions in line with the SLA to the customer for their confirmation

- Provide all relevant information on services for the customer to meet their responsibilities

EasyTV Responsibilities

- Appoint a functional manager for each of the supported services within **EasyTV**

- Manage the functional management of IT Services (e.g. Support & maintenance, Training and communication of services including support services)

- Appoint a single point of contact for liaising with the IT Help Desk function

- Provision of required information in order to solve reported issues

UPC Ireland will supply the above services to **EasyTV** primarily through its core engineering team located in Ireland. This local team is also supported through its corporate engineering function located in the Netherlands.

UPC Ireland has 20 plus years experience in installing and operating both analogue and digital encryption systems. Throughout this period they have worked closely with equipment vendors deploying the latest in encryption technology into their networks and have gained extensive knowledge on how to successfully manage these systems on a day to day basis, ensuring platform stability and maximum uptime for the service. Through the UPC Broadband ECC Division based in the Netherlands the local team has access to a core team of encryption subject matter experts and between the two engineering groups can provide an extensive range of engineering knowledge and support in this area.

Multiplexing Distribution & Transmission Services

RTÉNL plans to install the necessary infrastructure to establish, operate and maintain the multiplexes required to meet the obligations that have been placed on RTÉ in respect of the public service multiplex and to provide services to those who are awarded commercial multiplex contracts by the BCI.

RTÉNL has the access to expertise and experience required to successfully establish and operate the necessary infrastructure.

The applicant considers that there are significant advantages to ensuring the full coordination of the commercial and public service multiplex in order to;

- Coordinate construction so as to lessen service disruption to consumers for all existing analogue services, television and radio, and for DTT services as they come on stream

- Enable multiple MUX roll-out which will ensure cost effectiveness during the procurement construction installation and commissioning of DTT, thereby delivering a cost effective service to the applicant

Because of the historical nature of RTÉNL's business RTÉNL has existing major broadcast transmission infrastructure at every primary location in Ireland. This infrastructure has been established nearly 50 years and can not easily be replicated.

The spectrum available for DTT in Ireland has been internationally coordinated and agreed under the auspices of the International Telecommunication Union (ITU). Spectrum for DTT in Ireland has been coordinated around the locations of RTÉNL transmission sites and around the heights of RTÉNL transmission masts.

Infrastructure for broadcast transmission is a specific engineering discipline and while some aspects are similar to other disciplines much of the core knowledge required is specialist. RTÉNL in one form or another has been involved in television broadcast engineering for almost 50 years and has the specialist knowledge required. Therefore RTÉNL already have access to the majority of the skilled resources required for developing DTT. RTÉNL has put in place a project team to manage the project.

STB & Smartcard Distribution and Fulfilment Services

Osmosis Ireland was incorporated in 1999 and employs 30 staff. The company is based in a state of the art facility in North Dublin offering demonstration facilities, technical labs and warehouse space.

This move has evolved to the company now offering the largest portfolio of dedicated AV brands and having a dominant position in the commercial AV installer market.

Osmosis Management Team

Brian Honan - Managing Director

Brian started his career working in Intel and was responsible for the Chips business unit. Brian founded Osmosis Ireland Ltd in 1999. From a standing start Osmosis under Brian's

leadership has developed to the point that we are the markets largest Commercial Audio Visual distributor. Brian is a qualified Electronic Engineer.

Ger Browne - Purchasing Director

Gerard has over 10 years experience in the Telecommunications industry, starting as a Field Manager with British Telecom in the UK, moving back to Ireland and spending 6 years with UPC Ireland, 4 of which as the Field Services Contracts Manager. He was responsible for managing Installations out-sourced to contractors, successfully launching UPC's digital service, and managed the migration of UPC's MMDS analogue service to digital. This experience gained within UPC on previous digital migrations will be very beneficial to Liberty's proposal, particularly when working within the installer channel and preparing the installer base for a launch date. Ger is a qualified Electronic Engineer.

Other senior management include David Fitzgerald – General Manager and Des Crotty – Finance Director.

Access to Channel

Osmosis will help **EasyTV** develop a channel of all of the major installers and retailers in the Irish market. There are more then 450 AV installers in the Irish market; Osmosis has 90% as existing credit customers. Installers are located nationwide.

Product Launch

Osmosis will provide **EasyTV** the benefit of its experience in launching TV access products and assist in the following areas:

- Promote **EasyTV** launch through a series of nationwide channel events targeting existing and new resellers

- Ongoing marketing with the installer base via weekly email offers and an active telesales team internally

- Delivery of nationwide training programmes to the installer base. Courses would be held in their state of the art demonstration facilities in Clonshaugh, and for installers outside Dublin training sessions would be held in strategic centres throughout Ireland

Technical Support

Using its existing technical support structure Osmosis will offer retailers/ installers technical support. Additionally Osmosis will offer the **EasyTV** Customer Service call centre an escalation path for technical support.

Shipping

Osmosis will ship to retailers and installers as would normally occur in daily business. Shipments will be next day nationwide and full traceability will be offered on all shipments via PODs retained. Orders from **EasyTV** for end users will likely come from web based transactions that come into the **EasyTV** site directly. Osmosis will offer a service of delivery for these orders next day nationwide. Full web based tracking will be provided to the **EasyTV** Customer Call centre.

Returns

Osmosis will provide a fully functional returns process for **EasyTV**. Osmosis will operate a tracking system for returns from installers and retailers with reporting to **EasyTV** on trends and percentage return rates from individual channels. Returned goods will be refurbished and used for a swap pool for customers that have service issues. Osmosis will operate the swap pool and returns service for **EasyTV**.

Telesales and Customer Support Services

Since forming in 1990 Rigney Dolphin is now the largest indigenous Irish outsource provider, employing over 900 staff, they have the resources, experience and skills to add significant value to their client's business strategy, driving their long-term, profitable growth. Rigney Dolphin's size allows them to transfer economies of scale to their clients and to provide their experience to this submission for DTT Multiplex Contracts.

Whilst the character of Rigney Dolphin is that of a dynamic customer interaction company, they are primarily a human contact business. People are their business and the key to their success.

Rigney Dolphin's integrated product and service solutions enable them to provide a specific, complete end-to-end solution to their clients, fully trained staff are available 24 hours a day 7 days a week.

- Offering Customer Care
- Technical Helpdesk Support
- Back office Processing
- Outbound Customer Marketing
- CRM Management

Rigney Dolphin is ISO certified under ISO 9001:2001

Rigney Dolphin is approved by the Irish Data Protection Commissioner and is a member of the following professional associations;

- CCMA, Contact Centre Management Association
- International Association of Outsourcing Professionals
- IDMA, Irish Direct Marketing Association
- The Marketing Institute
- Chamber of Commerce, Dublin & Waterford

Rigney Dolphin has also embarked on the UK Customer Contact Association accreditation process and will be fully accessed and accredited by Q3 of 2008.

The principles of the Global Standard© cover key business areas in customer focus as follows:

- Performance & operational effectiveness
- Recruitment, selection and retention strategies
- Learning and development
- Legislation, regulation & policies affecting your operation
- Governance framework and strategic alliance

Awards Won 2007:

- Customer Services Team of the Year IT

- Customer Services Team Leader of the Year- Finalist

- Customer Services Representative of the Year-Highly Commended Award Winner World Contact Centre Awards

- CCMA, Contact Centre of the Year – Finalist

- CCMA, Contact Centre Team Leader of the Year –Finalist

Awards Won 2008:

- World Contact Centre Awards – Best outsourcing partnership with Perlico – winners to be announced June 2008

- Best Customer Service with Meteor Mobile Communications (Highly Commended)

Existing Client Contracts:

Client Name	Services Provided	Staff	Contract Length
Meteor	Full Outsource of all customer service and outbound customer marketing functions, including technology, all HR functions, hardware etc	Dublin 100+	Commenced in 2004, current term is until 2009
Perlico	Full Outsource of Customer Service, Technical Support, Cross-Selling Team, Support Staff, Outbound Telesales, Outbound Tele-Research, Credit Control Management, Back Office Processing	Waterford 40+	Commenced in 2006, current term is until 2009
UPC	Outsourced: Outbound Telesales Team	Waterford 25+	Commenced in 2008, current term is until 2010
Permanent TSB	After Hours In Source of HR function in Dublin contact centre. Rigney Dolphin manage all people activities for the after hours staff (10pm to 8am and weekends)	Dublin 12+	Commenced in 2006, current term is annual renewal

Management Team

Candice Rea (Business Development Manager) – Project Manager

Candice has had extensive project management, consultancy and operational experience in Contact Centres throughout the Asia Pacific Region. Candice has over 10 years experience in outsourcing, outsource vendor management and Subsequent change management across Telecommunications, Government, Financial Sectors and NGO's.

Candice most recently project managed the selection and implementation of the Freeview New Zealand Contact Centre, Candice was responsible for the engineering, deployment and ultimate service delivery of the customer and dealer support solution for Freeview's DTT service in New Zealand.

Conor O'Byrne (Operations Director) – Project Sponsor

Conor is a graduate of Waterford Institute of Technology where he obtained a (BBS) (Hons) specialising in outsourcing services. Since joining Rigney Dolphin in 2001 he has progressed through the company, holding positions including key account manager and contact centre manager.

Conor has a wide range of experience in managing outsourced contracts in a number of sectors including the Telecommunication, Automobile and Financial Services industries.

3.4.1.f. What is the relevant experience of existing organisations that are participants in, or closely involved with, the application? (Please include references to any existing operation, preferably in which the applicant has a direct involvement that is comparable to the proposed service in Ireland including brief details of the duration and size of the business.)

Irish Digital TT Holdings Limited (IDTTH), under corporation, is a wholly owned subsidiary of LGI Ventures BV ("LGIV"). LGIV is a limited liability company incorporated under the laws of the Netherlands and is an indirect wholly owned subsidiary of Liberty Global, Inc., (LGI).

LIBERTY GLOBAL INC.
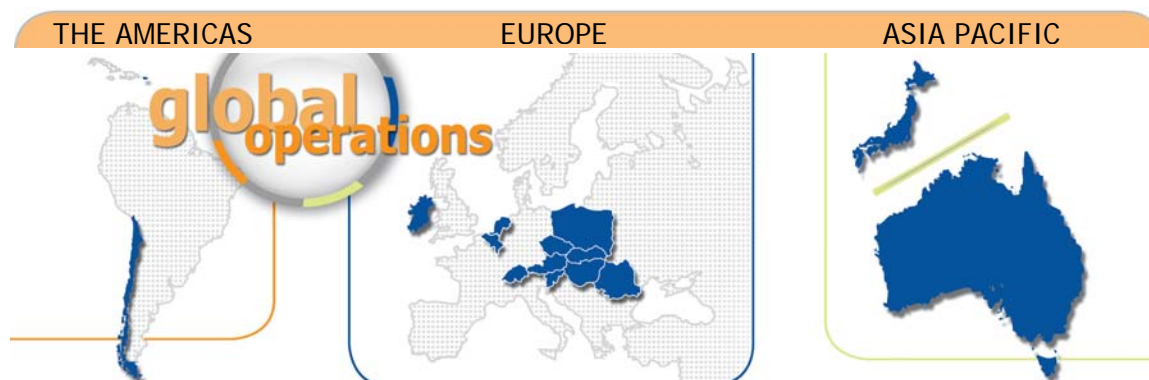
LGI is one of the fastest growing TV service operators in the world with market-leading operations across 15 countries, 30.2 million homes passed, 16.2 million customer relationships, and 24.0 million video, voice, and/or internet subscriptions. LGI has 22,000 employees worldwide and its operations also include significant media and programming businesses such as Chellomedia in Europe. LGI is included in Fortune 500, Forbes Global 2000, NASDAQ 100 and FTSE4Good indexes. See Website: www.lgi.com
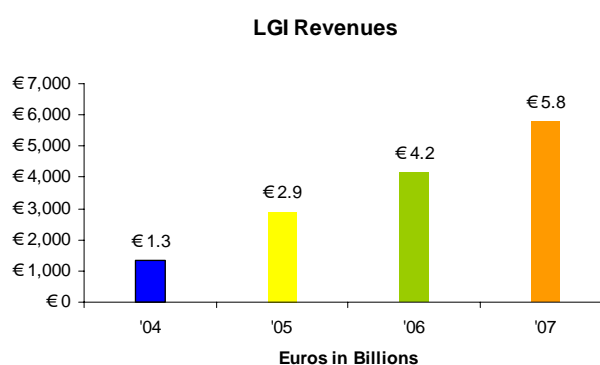
UPC Broadband (Europe)

Through its UPC Broadband division, LGI is active in 10 countries in Europe offering video, broadband internet and telephony services to 13.6 homes passed and nearly 9.7 million customers. UPC Broadband operates cable networks in Western Europe (the Netherlands, Switzerland, Austria, Ireland) and Central and Eastern Europe (Poland, Hungary, Romania, Czech Republic, Slovakia and Slovenia). LGI also owns a controlling interest in Telenet in Belgium.

UPC Broadband Ireland (UPC Ireland) is a wholly owned subsidiary of LGI and owns and manages cable and MMDS franchises in Ireland.

The relevant experience that LGI brings to Easy TV is as follows:

- Unmatched experience of deploying an executing successful Pay TV strategies across a variety of markets and platforms

- Thorough understanding of all of the key elements in the value chain and ability to ensure that the operation gets it right first time

- Major procurer of goods and services from a large variety of service providers

- Digital video expertise supported by centralised European research and development to ensure that digital offerings remain fresh and ahead of the curve

The relevant experience that RTÉ brings to **EasyTV** includes, but is not limited, to the following:

- Significant experience in acquiring television content

- RTÉ is the PSB, and brings a unique attribute to **EasyTV** as it can ensure full inter-operability between the PSB MUX and the Commercial MUX's

- RTÉ has extensive experience in rolling out published material (i.e. RTÉ guide)

- Largest seller of television advertisement in Ireland

3.4. 9(2)(b)

The adequacy of the expertise and experience and of the financial resources that will be available to each applicant and the extent to which the application accords with good economic principles

For ease of reference, this criterion will be assessed in two parts:

- • Expertise and experience available; and

- • Adequacy of the available financial resources and accordance with good economic principles.

3.4.2. Part 2 – Financial Resources and Accordance with Good Economic Principles

This part of the application is divided into three sections:

- • analysis of the marketplace;

- • business plan; and

- • funding arrangements.

Applicants should bear in mind when providing information that the BCI will wish to consider the extent to which each application is in accordance with good economic principles.

Analysis of the Marketplace

Applicants are required to set out their analysis of the marketplace, in a concise and focused manner, including responses to the following:

LGIV and RTÉ have engaged Booz Allen Hamilton [BAH], a top tier global management consultancy to review the marketplace and the opportunity for commercial DTT services in Ireland. An extensive report "DTT market assessment in Ireland" is attached which we will be referring to as we address this section. For ease of reference pages 6-9 of this report ties the questions below to the relevant pages of the report. Report attached in Appendix A.

3.4.2.a. What assessment have you made of Ireland's economic prospects in the medium to long term? How has this influenced your proposals for the business plan? What assumptions have you made, implicitly or explicitly, regarding future trends in the population, number of households and socio-demographic mix?

While we expect that the rate of economic growth that has been experienced in the past decade will slow down we are still expecting a robust average growth of 2% annually throughout the licence period.

This growth level has had some influence on our thinking and it is our belief that the time is now right for a value for money offering which addresses the low end of Pay TV pricing while providing customers with a quality TV offering.

Our trending on population and households growth is driven by a 1.2% CAGR in population growth (Reference pages, 13 & 33-36 in Appendix A) and has been largely based on the BAH analysis which has been sourced from a variety of primary and secondary research resources including the CSO regional population projections.

3.4.2.b. How would you assess the existing market in Ireland for television services from a supply perspective (e.g. services available, pricing, service providers etc)? (This should cover all delivery platforms, including terrestrial, satellite, cable, MMDS and IPTV)?

We would assess the existing marketplace for supply of television services in Ireland to be both extensive and competitive from a platform and content supply perspective.

The platforms diverge between the free services available on Terrestrial and FTA Satellite and the competitive marketplace for pay television serviced by the following platforms: Satellite, Cable, MMDS, IPTV and deflectors.

Approximately 33% of the TV households rely upon FTA services for their Primary TV viewing today ranging from analogue terrestrial Irish only (17%), analogue terrestrial Irish with receipt of UK terrestrial overspill (12%) and FTA satellite (4%) which splits into English and non English language services.

The remaining 67% of TV households rely upon pay television services for their Primary TV reception broken out as follows; 31% Digital Satellite (Sky), 13% Digital Cable (primarily UPC), 15% Analogue Cable (primarily UPC), 6% Digital MMDS, 1% analogue MMDS, 1% IP-FTTH (Magnet, Smart).

Supply of content ranges greatly by platform but quite a high percentage of viewership (+/- 70%) is satisfied by the Irish terrestrial and the UK terrestrial channels to a lesser extent. Pay TV platforms operate on the basis of providing the key UK terrestrials and a variety of other channels covering general entertainment, news and thematic channels.

Pricing within the pay sector ranges from approximately €20 to €34 for multichannel TV services with higher pricing for premium service packages with Sports content being the major driver here. There is not currently any offers being supplied to the marketplace below €20

For a complete and in depth analysis of the supply side please refer to pages 14 through to 17 and 38 to 46 in the appendix of the BAH report in Appendix A.

3.4.2.c. How would you assess the same market from a demand perspective (e.g. consumers' preferences and satisfaction levels, latent demand, attitudes to new technology and new services, willingness to spend)?

In our assessment there is a significant demand from consumers for a lower cost alternative to the existing Pay TV market offerings, particularly where the pricing better reflects the actual levels of content consumed.

We believe that the roll out of this platform will offer increased consumer choice from both a pricing perspective and in a wide range of areas will offer for the first time real platform choice.

We believe this demand will vary by platform and region and core areas of demand will exist in the following sectors;

- Analogue terrestrial homes with UK overspill

- Analogue terrestrial price conscious consumers

- Analogue Cable customers particularly in single TV households

- Sky and MMDS non premium customers

- Non urban Sky customers who may not have had another platform choice

The illustrative packages have been formulated based upon consumer viewership levels with the aim of satisfying the largest possible audience while remaining within the technical constraints of the platform.

The soft pay tier we believe will directly address the loss of UK overspill reception (starts in 2010) and at a low price of €49 for six months viewership is in our assessment at a level which will be attractive to the subscribers who will lose service. Further the Pay TV industry in Ireland was formed on the basis of receipt of the UK terrestrial channels and as the services and channel offerings expanded customers were not given the ability of opting out of these new services. This soft pay for the first time introduces to the market a package which satisfies the demand for a low priced alternative to Satellite, Cable and MMDS. The mid pay tier offers the next most popular genres bundled with a DVR and is designed to have broad appeal across all demographics.

With the low pricing of both offers we believe that willingness to pay will not present a barrier to potential demand. The JV will seek to ensure that a set top box is below €149 and will work with manufacturers to continually drive this price down. We intend to also offer a rental model for customers which would allow them to amortise this cost over a three year period at a cost of €5 per month.

The STB being offered will be extremely easy to install and use and we do not see technical ability as a barrier to demand although there will be made available the support of installation on a national basis, further we are specifying a box which will have HD, MPEG4, MHEG5 and with Ethernet connectivity. A DVR option will also be made available. With this full functionality available we believe this receiver is sufficiently future proofed to provide the consumer with the comfort that they will not need to replace the box in the near term.

For a complete and in depth analysis of the demand side assessment please refer to pages 18 through to 23 of the report 'DTT Market Assessment Ireland' dated 24th April 2008 commissioned from Booz Allen Hamilton by LGI and RTE in Appendix A

3.4.2.d. What opportunities do you believe exist at (i) the retail level and (ii) the wholesale level for DTT-delivered services, and why?

(i)   On a comparison of viewership and pricing in the marketplace it is very apparent that there is a significant gap in the current Pay TV marketplace. All offerings for receipt of Pay TV services are currently above €20 and the introduction of the   **EasyTV**

packages will offer pricing at up to 60% below these offerings while offering viewership levels at 70% -80% of these packages.

(ii)   At a wholesale level we believe an opportunity exists to allow chosen operators to bundle the DTT offering with other services. To this extent **EasyTV** has contacted some of the leading communication service providers in the country to seek their interest. **EasyTV** will also enter into discussions with premium and other content owners to provide wholesale access to the platform. On both of these areas, **EasyTV** will need to balance the need for provision of wholesale access with the totality of the platform offering.

For a complete and in depth analysis of the demand side assessment please refer to pages 18 through to 23 of the report 'DTT Market Assessment Ireland' dated 24th April 2008 commissioned from Booz Allen Hamilton by LGI and RTE in Appendix A

3.4.2.e. How would you describe the competitive situation in the television services market in Ireland and, in particular, the issues facing new entrants?

We believe it to be a very competitive marketplace on the consumer side and differentiating any new offering from the existing offers will be critical to the platform's success. Key issues facing new entrants will be the abundance of content which is currently available leaving little room for offering new content to the consumer, other issues facing any new entrant will be marketing its service as it competes with the existing players and products. Having considered these issues we have chosen to re-package the best available content at new price points in the marketplace and in addition have allocated a significant marketing spend in the early years to drive consumer awareness and uptake.

For a complete and in depth analysis of the demand side assessment please Refer to pages 14 through to 17 of the report 'DTT Market Assessment Ireland' dated 24th April 2008 commissioned from Booz Allen Hamilton by LGI and RTÉ in Appendix A.

3.4.2.f. Why do you believe there is a demand for the service(s) you propose, be it at the retail or wholesale level, and what evidence can you provide to demonstrate this demand?

In reviewing and analysing the current marketplace we believe there is a demand for cheaper access to pay television services that does not exist today. We believe this demand is there based on both the top down analysis that has been conducted and on the relevant benchmarking in other territories which we believe have some similar characteristics to the Irish marketplace. Further the impending switch off UK and Irish analogue terrestrial signals will create a call to action amongst 1/3 of Irish TV households.

For a complete and in depth analysis of this assessment please refer to pages 18 through to 28 of the report 'DTT Market Assessment Ireland' dated 24th April 2008 commissioned from Booz Allen Hamilton by LGI and RTÉ in Appendix A.

3.4.2.g. How would you segment the customer-base for the proposed service(s) on a meaningful basis? What is the typical profile and size of each segment?

The Target Market has been segmented and prioritised based upon the BAH analysis as laid out on pages 22 and 23 of the report in Appendix A. This provides in detail the segmentation by size, by platform and social demographic indicators. Key priority target will be Analogue terrestrial IE, Analogue terrestrial IE & UK and Analogue Cable & MMDS.

- **Analogue Terrestrial IE.** This is the largest single group that will be affected by ASO December 2012. The current size is 260,000 households
- **Analogue Terrestrial IE and UK**. This group will be the first to experience disruption in analogue service when the UK Switch off analogue service begins in 2008. This group is used to the choice of a multi channel environment. When service is disrupted, this group is more likely to subscribe to a multi channel package, than make do with Irish channel only TV terrestrial transmission. (185,000 households)
- **Analogue Cable & MMDS.** This group have opted to pay for additional TV channels beyond the Irish Terrestrials and have thus far resisted the move to digital despite the low relative pricing differential (€2.50 per month to upgrade to digital). Our proposition to this group offers excellent substitution value which allows this group to go digital at a lower price than their existing analogue service today and provides similar content diversity within the mid tier.

Secondary markets exist for take up of second boxes from DTT pay subscribers and we have estimated this take up at 32%.

Additional opportunity exists for multi room viewing in homes with existing cable and satellite subscriptions with a heavier weighting to the Satellite secondary market given the satellite pricing of €15 per month.

Business Plan

This section consists of three components:

- *a comprehensive overview of the applicant's proposed business plan;*

- *a detailed set of financial projections; and*

- *accompanying notes to the projections.*

1. Overview

The overview must set out the key strategic, commercial and operational elements of the proposed business. It should include answers to, but not be limited by, the following questions:

3.4.2.h. What is the precise nature of the service or services proposed?

EasyTV is proposing the creation of a new alternative commercial TV platform for TV viewers in the Republic of Ireland to complement and support the PSB DTT service.

EasyTV is designed to create a new platform of mass appeal to the general public, ensuring the success of the Analogue Switch Off programme by facilitating a rapid switch from analogue.

The applicant is proposing a complete end-to-end operation based on a compelling yet simple customer proposition, targeted both at the segments currently relying on FTA access and the broader public, a ubiquitous distribution strategy and an superior ongoing customer experience.

The Customer Proposition comprises the following elements.

a) Essential Programming at Value-for-Money pricing

The service will provide pay TV programming to consumers with an innovative tiering approach to compliment the PSB channels already available on a FTA basis.

- **EasyTV's** "Soft Pay" entry tier of channels will provide access to the UK Terrestrial channels at a low cost of entry. This is considered essential as these channels will no longer be available post UK ASO to the segment of the public that rely on UK analogue terrestrial overspill

- **EasyTV's** "Mid Pay" standard tier of channels will follow a "Best of the Rest" approach providing a value for money selection from the most popular mainstream channels that are viewed today in Ireland in a broad range of genres

- Furthermore it is envisaged that a selection of popular premium sports and movie channels will also be available on the service

b) Access Devices to Support All Access methods

EasyTV features a range of access devices, designed to drive wide take-up of the service by facilitating all equipment options for potential viewers:

- **Easy TV** - branded Set-top Box (STB)

- **Easy TV** - branded Digital Video Recorder (DVR)
- **Easy TV** - branded Conditional Access Module (CAM) for insertion in third party access devices including STBs and TV sets that support the standards as mandated by BCI

It is envisaged that STBs will be made available to consumers on both a one-off upfront payment basis and via a monthly rental model.

c) Technology & Innovation

The platform will share common EPG functionality with the PSB Programming Pack augmenting the range of features and services to provided on the PSB Programming Pack.

d) Simple Packaging & Ubiquitous Distribution

The product will be made widely available through multiple channels including ubiquitous retail outlets across the country and will be packaged in such as way as to facilitiate "easy take home" and "easy installation".

These elements are now outlined in more detail:

Essential Programming at Value-for-Money pricing

EasyTV will be offering consumers the opportunity to use their new digital access devices to subscribe to a range of additional channels on a pay basis. Indicative pricing and packaging as follows:

"Soft Pay" Pack:

This pack addresses the needs of those consumers that currently receive UK analogue terrestrial TV that will be without service post UK ASO.

On an indicative basis we would offer 9 Channels including the key UK content of BBC One, BBC Two and Channel 4 priced at €49 for 6 months, as follows:

- BBC One
- BBC Two
- BBC Three
- BBC Four
- Channel 4
- TV3 ABC1 (This is the working title for a new channel from TV3, which will deliver a compelling Irish and international schedule of bespoke news and current affairs, as well as drama, comedy and documentaries).
- Channel 6
- City Channel (Time Share "TS")
- Extreme Sports (TS)

"Mid Pay" Pack:

EasyTV's standard tier of channels will follow a "Best of the Rest" approach providing a value for money selection from the most popular mainstream channels in a variety of genres that are viewed today in Ireland.

On an indicative basis we would offer 22 Channels with a broad range of the most popular TV channels priced at €99 for 6 months(also includes above Soft Pay Entry Pack channels) , as follows:

- CBBC (TS)
- Cbeebies (TS)
- E4
- MTV
- Living TV
- Film4
- Discovery
- More4
- UK TV History
- Paramount Comedy
- General Entertainment Genre[1] (e.g. UKTV / Virgin1 / Sky One or equivalent)
- News Genre[1] (e.g. BBC News24, CNN, Sky News or equivalent)
- Sports News[1] Genre (e.g. Setanta Sports News / Sky Sports News or equivalent)

Note[1] Discussion is still on-going as to actual channels to be included in these genres.

Premium Packs

It is envisaged that 6 premium channels offering 5 sports channels and also a movies service from multiple channel providers will be available to consumers in SD and potentially HD. The proposed retail prices of these services and the specific channel lineups are yet to be determined.

Access Devices

EasyTV is providing consumers with a comprehensive range of access products (that meet or exceed that minimum specification as defined by BCI) allowing them to receive both standard and high definition DTT via their existing TVs or new integrated digital TVs as they come onto the market. The range of access devices are as follows:

- Set-top Box (STB)

- Digital Video Recorder (DVR)

- Conditional Access Module (CAM)

The STB will allow consumers to continue using their existing analogue TV sets assuming they have a SCART interface. The consumer will be able to connect an existing video recorder to the STB and record and play back any programmes that they have access to via DTT. The STB can be used to view FTA channels only or FTA and all pay channels offered by **EasyTV**. The STB will have an electronic programme guide (EPG) that shows the consumers the timings and brief synopsis of all digital programmes on both FTA and pay channels planned for transmission over the next 7 days.

The DVR, also know as the digital video recorder (DVR), is a device that records video in a digital format to a hard disk drive. The DVR allows the consumer to record one programme at the same time as they are recording another program. The DVR allows the consumer to pause, rewind and fast forward a live program whilst still recording another programme.

The DVR can be used to view FTA channels only or FTA and all pay channels offered by **EasyTV**. The DVR will have the same basic EPG functionality as provided on the STB but will in addition allow the consumer to have one touch recording of all programmes and the ability to schedule the automatic recording of their favourite programmes at whatever frequency daily, weekly etc.

The CAM would be purchased by consumers that third party STB/DVR or have an integrated digital TV (IDTV). Assuming these third party access devices or IDTVs have CAM interface then the consumer can simply plug the **EasyTV** CAM into the device to view any **EasyTV** pay channels without purchasing an **EasyTV** STB or DVR.

3.4.2.i. What are the commercial terms on which the service(s) will be offered (including pricing proposals and longer-term pricing strategy)?

EasyTV's retail prices for upfront purchase of access devices are targeted to be not more than as follows:

- Set-top Box (STB) - €149

- Digital Video Recorder (DVR):

- *Standard DVR Price* - €249

- *Discounted DVR Price when purchased with "Mid Pay" Programming Pack* - €149

- Conditional Access Module (CAM) - €49

The consumer purchases its **EasyTV** access device via the retail channel and therefore has full ownership of the device. The consumer is free to sell or transfer its rights in the access device. The retail price includes a WEEE charge which means the purchaser of the access device can return to the retailer free of charge for disposal. **EasyTV** does not regard access devices as a profit making line and therefore, other than the application of necessary distributor/retail margins, will sell access devices at cost. We expect the cost of access devices to fall over time and any price reductions in manufacturing would be passed through to the consumer.

Access devices are supplied with manufacturer's one year warranty. Any units failing within warranty will be replaced free of charge upon return to retailer. If the units fail outside of warranty then will offer a return to supplier repair service (subject to economic viability of any repair).

EasyTV will offer a rental on the STB at a cost of €5 per month with a minimum rental period of 36 months. All rented STBs will be covered by a free replacement service during the rental period (subject to the STB not being deliberately damaged or tampered with). The customer will undertake to pay for the STB by means of direct debit.

Programming Packs

Target retail prices for Programming Packs are as follows:

- 6 Months Pre-paid Soft Tier Programming Pack €49

- 6 Months Pre-paid Mid Tier Programming Pack   €99

The consumer purchases a 6 months Programming Pack via the retail channel which includes a smartcard with entitlements to watch the various channels associated with that Programming Pack. The smartcard is only activated once it is 'paired' with a specific access device (i.e. STB, DVR, or CAM) and the authorisation automatically expires 6 months from that date. By pairing access devices and smartcards this means that an access device can only be matched with one smartcard and vice versa.   The customer can top-up the smartcard before the expiry date to extend the period for an additional 6 or 12 months. Smartcards can also be upgraded (via the **EasyTV** website or Telesales) to a Standard or Premium pack smartcard. Also, upon expiry a smartcard can be downgraded to have Mid or Soft pack entitlements.

If the consumer moves house then they will be able to use the access device and smartcard to access services at their new address or transfer ownership to the new occupants. There are no restrictions in terms of usage of the access device or within home (i.e. the access device can be used with any TV).

Multi-Room Viewing

Consumers interested in watching digital TV on two or more TVs in the home at the same time will need to purchase additional access device(s). If the consumer also wishes to view pay TV programming simultaneously on multiple TVs then they will need to purchase additional Programming Packs, to be priced as follows

- "Soft Pay" customers will buy the additional pack for €49 per six months.

- "Mid Pay" customers will also buy the additional pack for €49 per six months (this is a discounted rate at 50% of primary "Mid Pay" service price)

EasyTV has identified the customer segments for a DTT service as follows:

DTT Target Segments	Why DTT
Analogue Terrestrial Homes - Irish Channels only	Analogue will no longer be available after 2012
Analogue Terrestrial Homes - Irish and UK Channels	Immediate relevance as analogue UK switches off, therefore no longer spill over benefit.
Digital Satellite Homes	Consumers in rural areas were previously limited to Digital Satellite as a method of receiving UK channels.
Analogue Cable	Value for money alternative to Analogue Cable for essential content. Enhanced digital viewing experience through DTT.
Analogue MMDS	Analogue MMDS will be phased out. Enhanced digital viewing experience through DTT.
Premium subscribers (cable and satellite)	Some opportunity to combine DTT with premium sports subscriptions
Digital Cable Homes	May consider for second room viewing.
Digital MMDS	Potential for improved reception quality in certain areas
Second/Third TVs	Ease of Installation, Lower Cost Option
Holiday Homes	Pay for what you want

Socio demographic profiles of Core Customer Segments

- The profile of individuals living in terrestrial analogue homes implies they are more likely to be located in mainly rural areas, are older (45 plus), retired empty nester in the C2DE and farming class. Ease of access to purchase and installation will be a compelling feature of this proposition to this market. Information cascade on the actual service in addition to installer assistance will be key to the distribution model in servicing this market.

- An analysis of the multi-terrestrial segment suggests the demographic profiles are broadly similar although media habits point to heavy TV usage. Therefore range and choice of channels through the subscriptions packages will be a compelling feature of the service. They are mainly located in the east coast of Leinster and some parts of Munster, Waterford and Cork. Households are mainly classified as C2DE.

- Current users for Cable/Analogue MMDS are split among the social class groupings and are dispersed nationally. DTT will be of relevance to this group offering a better quality, lower cost option.

Source TGI & AGB Neilsen

Proposition Core Features

In the light of this demographic profile the DTT proposition as a whole is formulated around the following core elements;

- FTA Irish Terrestrial Channels carried on the PSB MUX

- The proposition provides access to UK Terrestrial Channels at low cost of entry to facilitate the percentage of the population which rely on UK analogue terrestrial overspill that will be without service post UK ASO

- To appeal to the broader market currently using Analogue/Digital Cable and Digital Satellite the proposition provides other essential content with a broad appeal including a mix of the most popular mainstream TV Channels

- Given the demographic profile of current FTA homes, the proposition will be widely available to purchase in retail outlets nationally and packaged in such as way as to facilitate easy "take home", easy installation and "ease of use" and "easy to pay"

- The product is both innovative and future-proof, offering the user a range of useful applications to enhance their viewing experience

3.4.2.k. In terms of sales, what distribution channels will be deployed for both DTT receivers and any subscription or other pay service, and how will these products and/or service(s) be marketed?

EasyTV's sales channel will be a mixture of indirect (via retail and installers) and direct (via telesales and the Internet) in order to reach as wide as possible a market.

The following products will be available at a standard retail price through via all the sales channels:

- Standard STB

- DVR

- CAM

- 6 Months Pre-paid Soft Tier Programming Pack

- 6 Months Pre-paid Mid Tier Programming Pack

- 6 Months Pre-paid Premium Tier Programming Pack

The consumer will be able to mix and match choosing whatever combination of access device is most suitable for them and taking their preferred Programme pack or indeed opting for FTA only. The four different sales channels are outlined below.

Retailers

It is envisaged that up to 35% of sales would be through all the major retail outlets including multiples, independents, electronic and media outlets.   The retail purchase model is as follows:
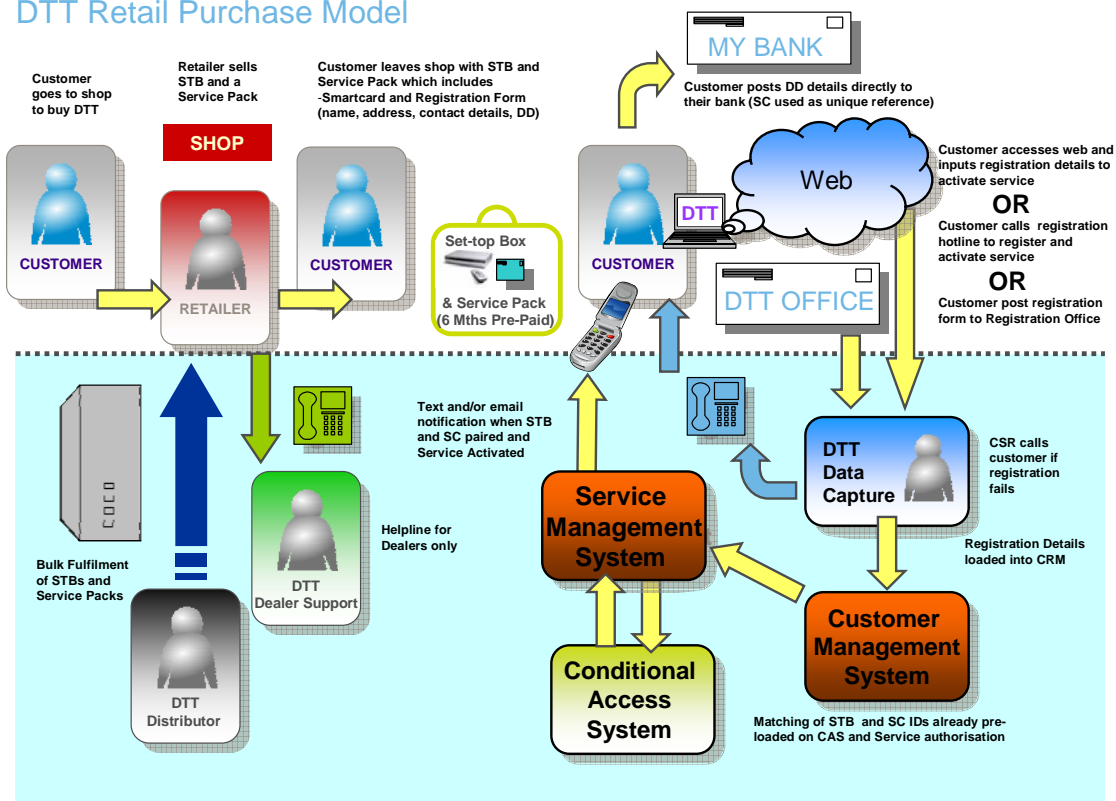
In line with ensuring accessibility and simplicity of purchase it is proposed to distribute the **EasyTV** proposition primarily through a "take home" distribution model. The primary objective of the "take home" model is to allow customers to take home the necessary equipment to facilitate self install directly from the retail store. This approach supports the following objectives:

- On the shelf presence facilitates propensity for impulse buy of product by consumer, by ensuring high product visibility in store

- Off the shelf pick up simplifies the sale process by aligning sale of products with that for other FMCG products, thereby reducing barrier to sale

- Take home model aligns sale process with other retail goods eliminating the need for complex in store management and specialised category management

- Take home model removes logistics and potential fulfillment issues around the delivery of STB to the customer

It is envisaged that the branded STBs and Programming Pack(s) will be available on a widespread basis through a range of various retail outlets (Multiples, Independents, Electrical etc). The customer will pay upfront in retail for STB and Programming Pack. The consumer will be able to plug and play at home to view all the FTA channels. In order to view any additional pay channels the customer must register directly with **EasyTV** (via Internet, phone or post) in order to match their STB ID with their smartcard ID and thereby activate their service. This process should take less than an hour from start to finish where the registration is done via the Internet or telephone Postal registrations may take a few days to complete.

Installers

It is envisaged that up to 35% of sales would be through a national network of local aerial/TV installers. The installer purchase model is as follows:

DTT Installer Purchase Model
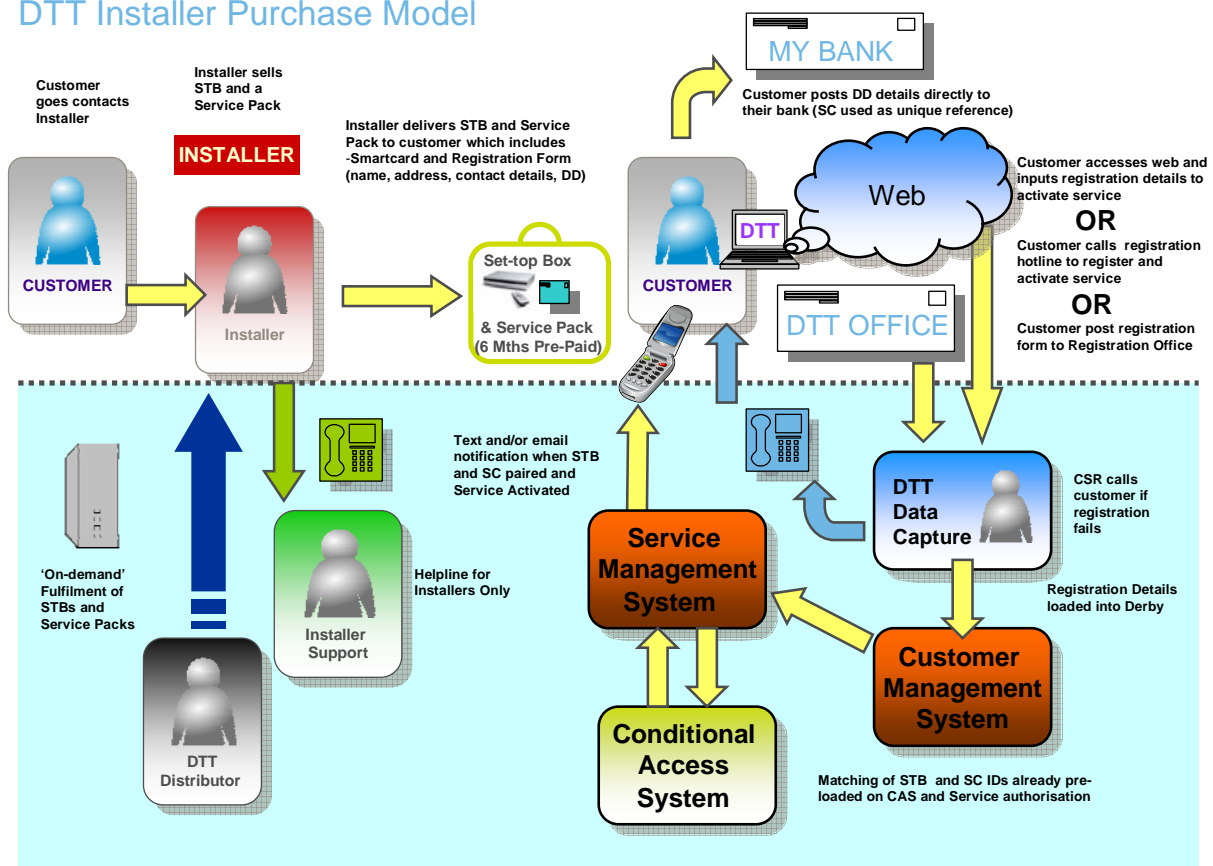
EasyTV has access to a proprietary list 450+ installers around the country. These installers are in constant contact with consumers in relation to problems with their analogue reception, and they provide an aerial repair and installation service. Some of these installers are full-time installers or technicians, others are retailers who provide a local installation service.

It is envisaged that this network of installers will be crucial in providing the installation support network necessary for a smooth rollout of the service. Information on transmission rollout will be communicated on a ongoing basis through this network, so that take up can be expedited on a rolling basis as the service progresses.

These small businesses already provide support and advice to analogue TV users in both rural and urban areas across Ireland and, in many instances would be the logical first port of call for information and guidance in respect of DTT and the impending analogue switch off.

The installers would be able to provide a complete range of services to the local community in terms of:

- initial advice and guidance on DTT

- supply of STBs and Programming packs

- supply or re-alignment of aerials where required

- full installation and activation of the STB and smartcard

- a brief end user demonstration on how to get started

The availability of such an all encompassing service would be important for those customers that are less technology literate.

EasyTV regards the installers as a significant route to market and would put in place appropriate support mechanisms in terms of awareness and training on DTT; marketing collateral on STBs and Programming Packs; availability of demo/spare equipment and access to a technical helpline.

Installers would in effect be the retailer of the **EasyTV** service to the end user and would receive a commission on all STBs and Programming Packs sold. Installers would order stock of STBs and Programming Packs (as required) directly from the **EasyTV** distributor with prompt delivery (24/48 hours).

Marketing of the **EasyTV** products and services will be based on the installers existing customer relationships, very specific targeting of homes in the area using analogue services and referrals from the **EasyTV** website and helpdesk.

The **EasyTV** STBs distributed through the various channels would include a list of approved local installers that customers could contact should they need provision or re-alignment of an aerial or need assistance with the installation. **EasyTV** would also refer customers who contact the **EasyTV** helpdesk with installation issues to approved local installers. **EasyTV** would require all installers that wished to be on the approved list to comply with a code of conduct to ensure that the advice given and prices charged by installers are appropriate and reasonable.

Approved installers will operate within an approved price framework, covering, but not limited to, the following range of services:

- STB purchase

- Antenna system

- Installation – no aerial adjustment

- Installation – aerial adjustment required (single/two-story house)

- Installation – new aerial and adjustment required (single/two-story house)

Internet

It is envisaged that 15% of sales would be through a web retail site on the Internet. The Internet purchase model is as follows:

DTT Internet Purchase Model
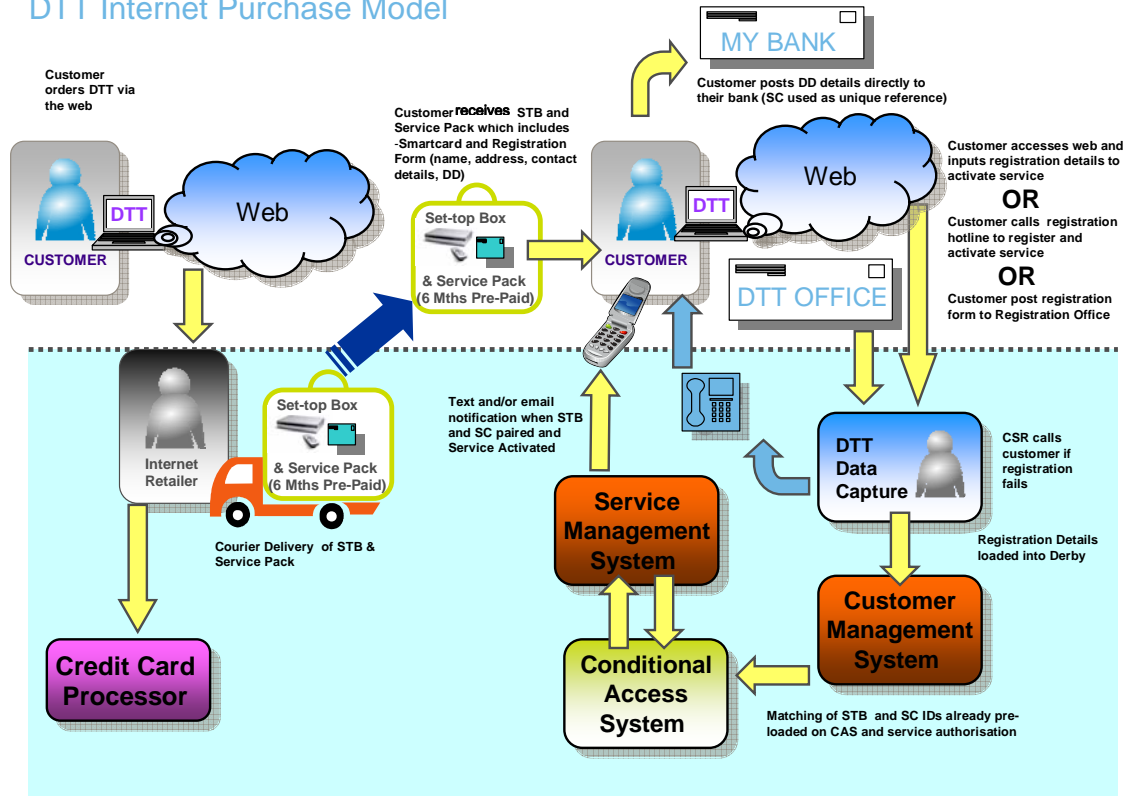
The Internet sales option will allow consumers to purchase STBs and Programming Packs from home or work at any time or day or night.

The web retail site would be linked to the DTT awareness site so that consumers could seamlessly move from seeking advice on DDT switch-off, getting details of the options available, confirming availability of DTT coverage at their address to finally placing an order for next day delivery. The web retail site would be easily reachable via websites and all the major search engines (e.g. Google). The web address would be publicised in all marketing material; in any TV, radio, press or outdoor advertising.

The fulfilment of Internet orders would require online payment by credit card and would ensure next day delivery to the consumer's home. The fulfilment process would be outsourced to a third party provider.

Telesales

It is envisaged that 15% of sales would be generated by the customer calling **EasyTV** and purchasing while on the phone (i.e. inbound telesales). The Telesales purchase model is as follows:

DTT Telesales Purchase Model
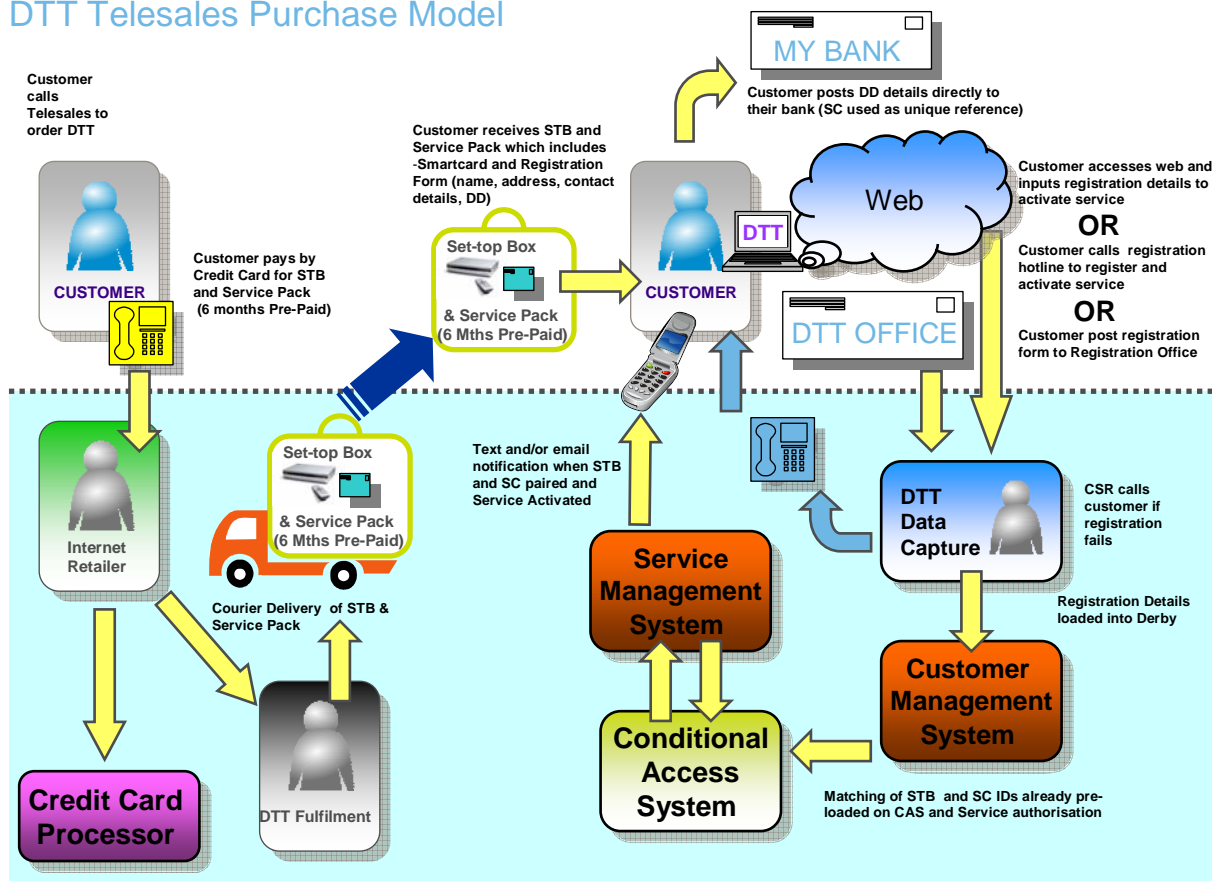
The telesales channel will cater for consumers without Internet access who want the convenience of ordering from home. The **EasyTV** telesales number would be publicised in all marketing material as well as any TV, radio, press or outdoor advertising.

The fulfilment of telesales orders would be identical to that for orders taken via the Internet with payment by credit card and next day delivery to their home. The fulfilment process would be outsourced to a third party provider.

3.4.2.l. How will the proposed service(s) impact on, and be affected by, competing services and/or products, both in the short and medium term, with regard to viewing behaviour and revenue?

The proposed service will offer a low cost alternative to existing Pay TV propositions, a replacement service for analogue terrestrial with UK channels & offer a low cost entry to digital pay services for existing FTA households. Annual impact & share of households by platform is laid out on pages 25-27 of the report 'DTT Market Assessment Ireland' dated 24th

April 2008 commissioned from Booz Allen Hamilton by LGI and RTÉ in Appendix A; and an analysis of viewership behavior privacy and revenue is laid out on page 28.

3.4.2.m. What is the projected demand (in terms of acquisition of DTT receivers, take-up of subscription services and viewing levels) for this service(s) for each year of the licence and how have these projections been derived?

The demand for pay TV services & receivers has been derived from the BAH market assessment report where 3 services have been analysed based on a number of potential factors and influences as set out on page 27 of the report. The estimates for subscription services used for business planning purposes are 25% below the BAH low case of 416k DTT households (free and pay) by 2015 with 75% of these being pay i.e. 312k DTT subscription households by 2015. Our business plan projections prudently reduce this further by 25% to 234k subs by 2015 & we assume limited growth beyond this period. Take up in the early years will be driven by UK & Irish ASO & an aggressive push of the new product into the marketplace.

3.4.2.n. How have the cost projections for the various programme sources identified by the applicant with reference to section 3.5 been determined? What commercial issues, if any, have still to be resolved before the supply of the proposed programming is secured?

The cost projections used are based on in-depth knowledge of the UK and Irish channel provider landscape. The parties behind **EasyTV** have considerable experience in dealing with multiple Content Providers and have built up relationships over time. As part of our preparations for this application document **EasyTV** have approached several Channel Providers who have expressed a strong interest in participating on this platform.

Final commercial terms with the various suppliers will be formalised once **EasyTV** is awarded the licence. The various commercial aspects of carriage would be formalised in a binding carriage agreement between the Licence Holder and the various channels which would be typically 2 to 3 years in duration. Prior to expiry of each agreement the parties would enter into renegotiation for renewal of carriage where appropriate. Where agreement can not be reached for continued carriage, then alternative content of similar quality and genres would be sourced from alternative providers.

3.4.2.o. What allowance, if any, has been made in the business plan to ensure that suitable DTT receivers will be available and what costs have been included to support the acquisition of the receivers (through subsidy or other means), as set out by the applicant with reference to section 3.6.

EasyTV fully recognises that the availability of suitable DTT receivers (that fully meet the minimum specification as laid down by BCI) at the point of service is critical to the success of the DTT rollout. Our research shows that there are currently no DTT receivers in production that fully meet the BCI specification and the requirements of the Applicant for NagraVision conditional access. **EasyTV** believes that this situation is unlikely to alter significantly over the next 12 months, unless he takes the initiative. **EasyTV** believes its intervention will catalyse these prices. Therefore, in order to secure the availability of suitable DTT receivers at the lowest possible cost, **EasyTV** will underwrite the development and manufacturing processes. The costs of development, testing and underwriting of initial production runs of STBs has been included in the **EasyTV** capex budget. By specifying STBs with embedded CA support (rather than via a CI interface) and purchasing in volume, we believe we can

reduce the retail cost of the STB to below €150, with a mid-term target price below €100. This approach also eliminates the need for the consumer to purchase a CAM along with the STB.

As the upfront cost of a STB at €150 could be a significant barrier to take-up, **EasyTV** will arrange a consumer rental option at €5 per month to spread the cost. This would require the customer to sign-up to an agreement to pay via direct debit for the STB.

In addition, **EasyTV** would on a platform neutral basis coordinate with the Government to provide support for specific sections of the community, particularly those people who are eligible for free TV licences paid for by the Department of Family and Social Affairs, to facilitate their entry into digital terrestrial television.

3.4.2.p. How have the cost projections for (i) coding & multiplexing, (ii) feed distribution to transmitter sites and (iii) RF transmission been determined in support of the coverage and technical proposals set out by the applicant in response to sections 3.7 and 3.8 respectively? Please describe what risk assessment has been made of cost accuracy and stability over the licence period, the nature and scale of the risks identified and the provisions that have been made in the business plan for managing these risks.

RTÉNL have provided the cost projections in relation to multiplexing, distribution and transmission services by way of a tariff which is calculated on a per multiplex basis and based on use of the necessary infrastructure.

RTÉNL are currently the only national broadcast transmission company and provide services to national, quasi-national, regional and local radio and television services in addition satellite up/down linking and to a host of other services to the telecommunication industry.

In addition to internal capabilities RTÉNL have used the following expert companies to assist in the overall project preparation, evaluations and in support of coverage and technical proposals set out in sections 3.7 and 3.8:

Project and Engineering

- ARUP Communication (UK): Review of the overall project plan. Engineering, Implementation plan and procurement

- ARQIVA: Mast and antenna engineering and implementation

- PROGIRA: Spectrum planning and coverage calculations

- MAGUM OPUS: Distribution system engineering and procurement support

- TRINITYSTAR: Antenna engineering and implementation

Economic and Legal

- KPMG: Financial analysis and preparation of the necessary tariff models

- LeCG Consulting: Analysis in relation to overall economic issues, legislation and regulation

- ARTHUR COX: Legal advice across all aspects of the project including procurement terms and conditions, tender analysis, tariff model, legislation

Three areas are fluid going forward:

1. Electricity costs - Electricity costs account for approximately 12% of the overall tariff. Electricity cost will fluctuate in line with charges from service providers.

2. Maintenance effort - RTÉNL does not envisage any major variation in this area other than the normal/annual industrial processes.

3. Technology adoption - The adoption of any new technology will be based on a cost benefit analysis and be self funding going forward.

3.4.2.q. What are the start-up costs and what capital expenditure will be required over the duration of the licence?

It is anticipated that total capital expenditure of €32.8m will be incurred during the licence period. In addition to capital expenditure, start up marketing costs of €1.9m will be required. The following table provides a summary of capital expenditure and start up marketing costs over the period 2008-2020. A more detailed breakdown of capital expenditure is included in Section 3.4.2v (vi).

Capital Expenditure & Start Up Costs									
Cost	**2008** €'000	**2009** €'000	**2010** €'000	**2011** €'000	**2012** €'000	**2013** €'000	**2014** €'000	**2015-20** €'000	**Total** €'000
Total Capital Expenditure	713	5,057	4,934	2,524	4,504	4,309	4,596	6,166	**32,803**
Start up Marketing Costs	-	1,000	500	100	250	-	-	-	**1,850**
Total Capital Expenditure plus Start up Marketing	**713**	**6,057**	**5,434**	**2,624**	**4,754**	**4,309**	**4,596**	**6,166**	**34,653**

3.4.2.r. How does the proposed business plan fit strategically with the existing business activities of the participants of the applicant?

LGIV is a subsidiary of Liberty Global Inc, the ultimate the holding company of UPC Ireland. UPC Ireland is a service provider to **EasyTV** and is a significant provider of pay television services in the Republic of Ireland. While the new venture will have an arms length agreement in place with UPC Ireland it is via this arrangement that the new venture will be able to offer low cost alternatives into the marketplace while remaining both profitable and viable. From a UPC Ireland perspective it allows the entity to leverage and benefit from existing infrastructure, staff and knowledge and from an LGIV perspective, it fits its investment criteria of investing in multi-TV platforms.

RTÉ Commercial Enterprises Limited is a subsidiary of RTÉ an Irish public service broadcaster. The Broadcasting (Amendment) Act 2007 mandated RTÉ to rollout one national multiplex for public service broadcasting. RTÉ considers that it is critical that the commercial multiplexes are both commercially successful and closely coordinated with the public service multiplex on a national DTT platform. RTÉ believes that a successful DTT platform ensures choice for audiences throughout the state and enables RTÉ to achieve its objectives for the PSB MUX in the most effective fashion. RTÉ conducted a public process to identify the partner / partners whose objectives for DTT in Ireland were in RTÉ's view most closely

aligned with those of RTÉ. The current joint venture arrangement and licence application emerged from this process.

RTÉ is obliged as a public service broadcaster to achieve value for money. This requires that RTÉ not only controls its operating costs but seeks opportunities to reduce the net cost of its public service operations by generating a contribution from the exploitation related commercial opportunities. The proposed service represents such an opportunity.

3.4.2.s. What is the minimum acceptable pre-tax Internal Rate of Return for the business plan and how has this figure been arrived at?

The minimum acceptable pre-tax IRR for this project is 11% and this is based upon a subjective assessment of the business plan.

3.4.2.t. What provisions have been made for platform-wide initiatives to develop and/or promote DTT and the facilitation of digital switch-over (for example, a common approach to information dissemination on coverage and receiver acquisition or a common EPG solution)? Please include details of costs.

Promotion of DTT

EasyTV's primary objective is to achieve maximum national coverage available for the DTT service in advance of Analogue switch off while at the same time ensuring that audience disruption is minimised. **EasyTV** recognise that from a resource utilisation perspective, and to minimise disruption, a MUX can be most efficiently commissioned if all MUXES (including the PSB MUX) on a given site are commissioned simultaneously.

The proposed strategy is to seek to include all 53 Transmission Sites at the earliest feasible juncture consistent with RTÉNL's capabilities while at the same time taking account of population critical mass necessary to support a marketing and communications roll-out and all with the aim of a achieving a successful national consumer roll-out of the DTT service well before the final switch-over date.

EasyTV has developed a co-ordinated commercial transmission rollout sequence which aims to provide critical mass at the earliest juncture, such that by Q4 2009 85% of the national population is covered, rising to 93% in Q4 2012. In addition please note that in Q1 2011 96% of the larger urban areas will be covered i.e. the 171 cities and towns with populations greater than 1,500 people.

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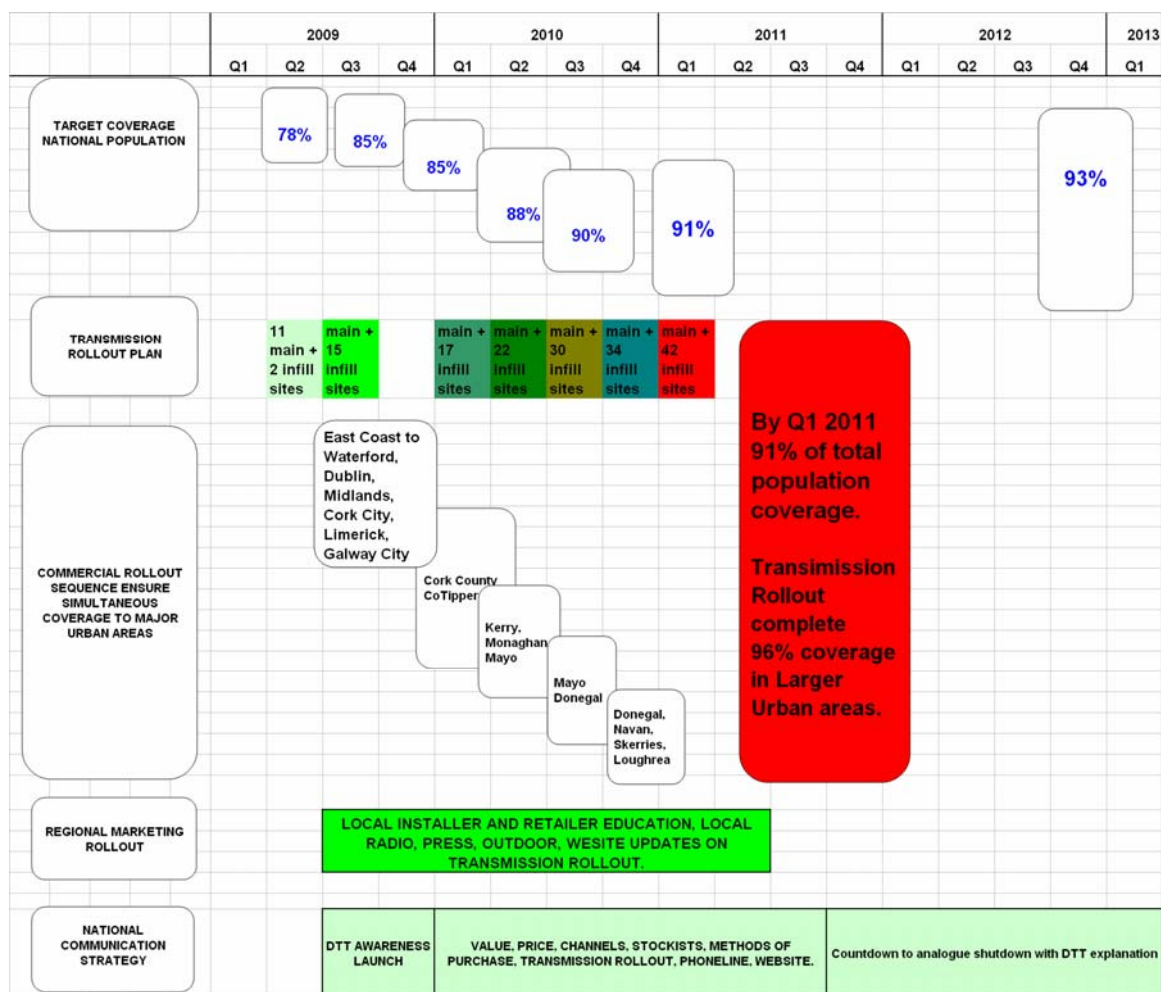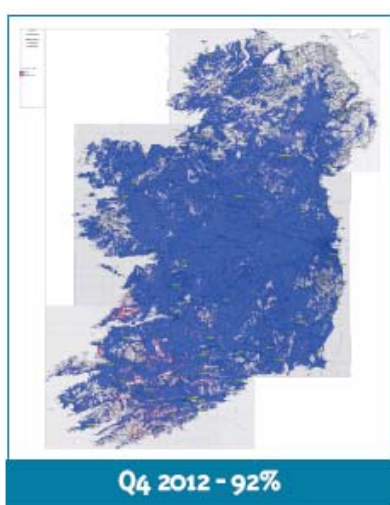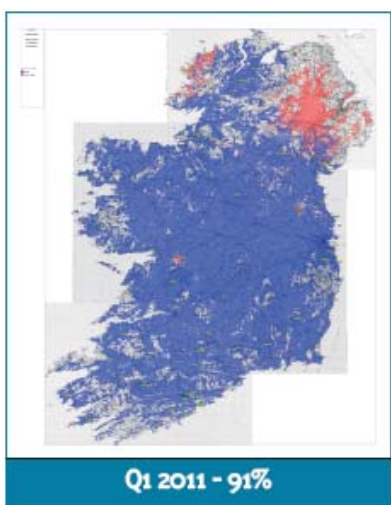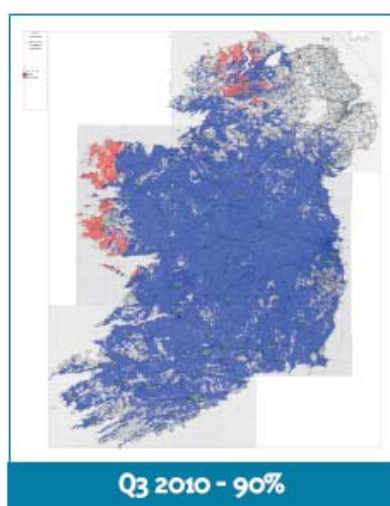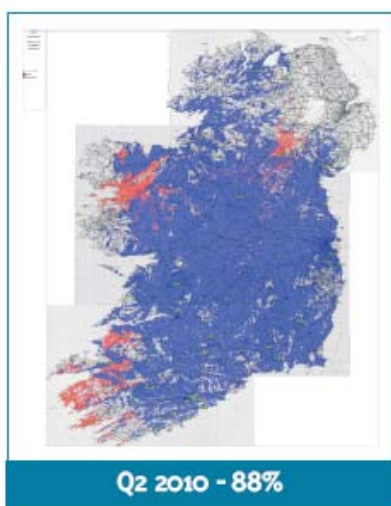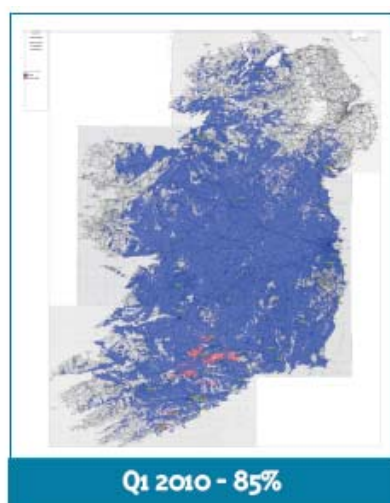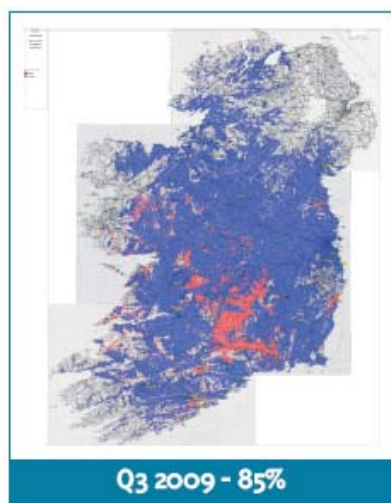The Rollout Timetable is detailed below:

Figure **EasyTV** Rollout Timetable

The Maps outlined below demonstrate the transmission rollout sequence and the coverage achieved within the period from Q3 2009 to Q1 2011.

Q3 2009 - 85%

Q1 2010 - 85%

Q2 2010 - 88%

Q3 2010 - 90%

Q1 2011 - 91%

Q4 2012 - 92%

Marketing Plan

The following provisions have been made to disseminate information on the DTT service, through a national communications strategy and a retail sales plan which will be synchronized with the National Transmission Rollout Timetable.

Marketing Expenditure & Start Up Costs									
Cost	2008 €'000	2009 €'000	2010 €'000	2011 €'000	2012 €'000	2013 €'000	2014 €'000	2015-20 €'000	Total €'000
Start Up Marketing	-	1,000	500	100	250	-	-	-	1,850
Consumer Advertising	-	750	900	900	900	500	500	3,000	7,450
Signage & Branding	-	300	200	100	100	100	100	600	1,500
Retail Channel Support	-	200	350	350	350	350	350	2,100	4,050
EPG	-	45	45	45	45	45	45	270	540
Website	-	75	75	75	75	75	75	450	900
Total Spend	0	2,370	2,070	1,570	1,720	1,070	1,070	6,420	16,290

Advertising

Provision has been made for a heavy weight national awareness launch of the DTT service in 2009 and a further heavy weight campaign in 2011 as switch off draws closer to act as a refresher burst to sell in the **EasyTV** Service to late adopters.

Ongoing tracking of both uptake and awareness will continue throughout the plan to ensure that activity is targeted at core segments where reaction is slow.

Retail channels

Provision has also been made to promote the service at retail and local installer level. The trade plan places a strong focus on encouraging a retail " push " strategy at the point of sale to disseminate information on installation and to up-sell the subscription packages.

The trade marketing campaign must commence early in 2009 and underpins the consumer launch.

Website

Provision has been made to build a comprehensive website to inform customers of the what, how and when, service offerings, and costs involved.

The website will be designed to be easily navigable with a clear and uncluttered presentation style through-out, and easy-to-read graphical content.

There will be a high visibility version for users with impaired vision. In addition to the Homepage describing the platform as a whole and the available packages, there will be sections on Channels available, Coverage, Reception Equipment, Setting-up, Retail outlets, an Installer section, and a Help and FAQ section.

The Coverage section of the website will feature an interactive mapping application that will enable viewers to easily zoom in on their location.

An overlay will illustrate if the viewer is in a valid reception area or not. This will be a clear simple to use interface that would not require the public to understand radio technology and/or interpret interference-limited coverage maps.

Marketing Plan

Q3 2009 Awareness Launch – Understanding DTT

A focused awareness campaign to both the public and the trade on the DTT service will be a critical success factor in achieving the targeted penetration levels for the service, so priority will be placed on this as part of the communications strategy. It is envisaged that this education campaign will dovetail with any planned government awareness initiative to promote the DTT service as a whole. We will ensure high levels of impact from this activity since it is vital to present DTT as a real and credible alternative to cable or satellite from the outset.

The initial primary goal must be to maximise awareness of the DTT platform. This is not an easily explained message and will take priority over trying to sell individual commercial packages across the launch period of activity.

The objective for the launch period will be to educate consumers on the overall DTT service and on the access devices necessary to avail of the service (i.e. Set Top Boxes with the additional access features).

This will be achieved through large format and special outdoor sites, varied and innovative press sizes, road-blocking of key segments on radio and rich media online as well as a heavy and consistent weight TV campaign.

The launch campaign will be targeting all TV homes in the country in order to ensure everyone understands the DTT platform from inception.

The total TV market can be segmented as follows with the red boxes showing the core focus for the activity as the campaigns progresses.

Targeted Brand Activity Q3 2009 to 2011 - How & when to get EasyTV.

A call to action campaign will be rolled out in conjunction with the awareness campaign to leverage launch awareness by quickly moving into targeted sales areas to sell the Set Top Boxes and channel packages

Of primary importance will be large urban centres including the main cities in the east coast to Waterford, Cork City, and the Midlands as these will be the first to have a disintegrated analogue service as UK analogue is switched off.

The message will focus on the overall package on offer, paying particular attention to the core product attributes and the uniqueness of the **EasyTV** DTT proposition. Key drivers will be information on geographical availability rollout strategy, value message, ease of access to a quality distilled channel package. It will include a direct call to action with a phone number, website address and details of where to buy the set top box locally.

The consumer message in both phases will reinforce the core proposition of the product which is a select distilled choice of DTT packages that truly reflect viewers core channel

preferences, easily acquired through retail outlets. In addition the future proof components of the STBs that offer credible benefits to the consumer will be encapsulated:

Digital TV – Accessed through your Set Top Box – HD enabled, One Touch record through PVR, EPG, Plug in access compatible with your HDTV.

Digital TV Made Easy - Easy to Buy, Easy to Install, Easy to View
Channels that you watch from just €49.₀₀ for six months
Available to buy through selected outlets Nationwide.

Details Free phone 0123456
Visit our website www.**EasyTV**.ie

Count Down to Analogue Q3 2011- Q4 2012

This will be an educational campaign with special relevance to those who only have access the indigenous channels since they will have experienced no decline in service prior to this point and are also not adopters of pay TV.

The advertising focus for this activity will be to tell people they must buy a STB in order to keep receiving TV and also to demonstrate the advantages of DTT by showing the packages of additional channels that can be bought for relatively low cost.

3.4.2.u. What risk assessment has been made of the business plan? What are the proposals for dealing with the identified risks? What contingency plans does the applicant propose to put in place?

We have reviewed the business plan and have identified key risks for which we have stress tested the key assumptions and developed a number of scenarios on the base case financial projections to determine the robustness of the business plan. The following key risks and scenarios have been developed and analysed.

1. Reduced Revenues
In order to determine the effect of reduced revenues on the business plan, a 10% reduction in revenues (as required by the BCI, and in line with the sensitivity assumptions provided below) is assumed. Under this scenario the peak funding is €24.3m and the post tax real project IRR is 14%.

2. Breakeven
Breakeven is not a risk but a measure of stress testing of the revenue line. In 2013 105k end of year subscribers (ex 2nd STB subscribers) are required to breakeven, while 143k end of year subscribers (ex 2nd STB subscribers) per annum are required to give a nil net cash position over the period of the licence (i.e. return of equity but no return on equity).

3. Increase in Direct and Operating Costs
In order to determine the effect of increased costs on the business plan, a 10% increase in both direct and operating costs excluding transmission costs and licence fees is

assumed. Under this scenario the peak funding is €24.7m and the post tax real project IRR is 16%.

4. Increase in Capital Costs

In determining the effect of this risk a 50% increase in start up capex is assumed, this equates to an increase of €2.3m. Start up capex includes IVR, box testing, EPG development conditional access systems, IT integration, startup, groundworks and professional support. Support capital, STB smart card costs and STB rental box costs have not been increased. Under this scenario peak funding is €24.5m and the post tax real project IRR is 18%.

Overall, we are satisfied that the business plan is sufficiently robust to provide returns to the shareholders and that the potential risks are such that they are covered within the committed funding from the shareholders. We are also comforted by the fact that the variable nature of the cost base allows us to breakeven in 2013 if only 54% of the subscriber forecasts are realised.

Applicants should include quantitative data wherever relevant including, as a minimum, the data requested in the market data template contained within the Excel workbook (reproduced in Annex 5 of this document).

The Market Data Sheet is provided in Appendix G.

2. Financial Projections

The financial projections should consist of an internally-consistent set of annual profit & loss, cash-flow and balance sheet statements using the Excel templates provided (and reproduced in Annex 4 of this document) to reflect the business plan described above.

In addition, a set of financial projections, using the same templates as before, should be provided to illustrate the following hypothetical situation:

> *all revenue is ten percent (10%) lower than in the base-case projections for each and every year of the licence period.*

All projections must be drawn up on a calendar year basis (i.e. ending 31st December) and presented in the format specified in the templates. Starting 1 January 2008, they must extend forwards to cover the full 12 years of the DTT multiplex licence period. Details of any partial year figures should be given in the accompanying notes.

All monetary values must be expressed in constant 2008 Euros (i.e. real not nominal prices) and exclude VAT.

3. Accompanying Notes

3.4.2.v. Please provide a comprehensive set of notes to accompany the financial projections including:

(i) A projected breakdown of households receiving DTT in terms of basic and premium subscriptions and free-to-air only at the Mid-point of each year of the licence period.

Refer to Financial Projections in Appendix E.

(ii) Projections for the number of TV households, by platform, that use DTT for secondary viewing (e.g. televisions in kitchens, bedrooms etc).

Refer to Financial Projections in Appendix E.

(iii) The composition of DTT secondary televisions in terms of free-to-air only and subscription (basic and premium) and their projected share of the pay-TV market.

Refer to Financial Projections in Appendix E.

(iv) Explanation of how each line in the Profit & Loss projections has been arrived at, including details of all underlying assumptions.

Refer to Financial Projections in Appendix E.

(v) Details of the timing and size of the funding requirement with reference to the cash-flow projections and, for each year of the projections, the maximum level of borrowings drawn under all facilities.

Refer to Financial Projections in Appendix E.

(vi) A comprehensive breakdown of all capital expenditure projections (consistent with the overview and cash-flow projections) by category and calendar year.

Refer to Financial Projections in Appendix E.

(vii) An explanation of the accounting principles on which the financial projections have been prepared, and confirmation that they are in accordance with accepted accounting standards in Ireland.

Refer to Financial Projections in Appendix E.

Separate notes must be provided for the projections dealing with the sensitivity test. They must include details of any deviation from the situations described in the accompanying notes described above.

Refer to Financial Projections in Appendix E.

(i) A projected breakdown of households receiving DTT in terms of basic and premium subscriptions and free-to-air only at the Mid-point of each year of the licence period.

Refer to Financial Projections in Appendix E.

(iii) The composition of DTT secondary televisions in terms of free-to-air only and subscription (basic and premium) and their projected share of the pay-TV market.

Refer to Financial Projections in Appendix E.

(iv) Explanation of how each line in the Profit & Loss projections has been arrived at, including details of all underlying assumptions.

Refer to Financial Projections in Appendix E.

(v) Details of the timing and size of the funding requirement with reference to the cash-flow projections and, for each year of the projections, the maximum level of borrowings drawn under all facilities.

Refer to Financial Projections in Appendix E.

Funding Arrangements

This section consists of three components:

> • *An account of the applicant's funding strategy;*

> • *The financial standing of the applicant; and*

> • *Evidence of the available financial resources.*

1. Funding Strategy

The funding strategy must detail how the applicant proposes to meet all pre-operational and subsequent funding requirements by addressing the following questions:

3.4.2.w. What are the funding requirements of the business plan prior to contract, prior to launch and after the launch of the service through to the end of the licence period?

Refer to Financial Projections in Appendix E.

3.4.2.x. How do you propose to meet these requirements? Please provide full details of all proposed funding including timing, amount, source and nature of the funding. This must include a clear distinction between drawing upon existing resources and putting new facilities in place.

Refer to Financial Projections in Appendix E.

3.4.2.y. What flexibility is there in the proposed funding arrangements to deal with significant deviations from the business plan?

Refer to Financial Projections in Appendix E.

3.4.2.z. What alternative financial resources does the applicant have access to if the proposed funding is not forthcoming or sufficient?

Refer to Financial Projections in Appendix E.

2. Financial Standing

Where the applicant is already a corporate body, the following must be provided (the following should be read in conjunction with the information requirements set out in section 3.3 above):

3.4.2.aa. Full details of the equity share capital of the company.

Not applicable, the applicant is not yet incorporated.

3.4.2.bb. Full details of all other share capital already in issue, including all forms of preference shares, convertible loan stock, options, and warrants.

Not applicable, the applicant is not yet incorporated.

3.4.2.cc. Full details of the borrowing facilities currently available to the company, or to the parent company in the case of inter-group funding, and the extent to which they are currently drawn down. This must include the amount and terms of all borrowings (repayment details, covenants, etc.), any security provided and charges against company (or other group company) assets, and the names and addresses of lenders of and guarantors to any of the facilities.

Not applicable, the applicant is not yet incorporated.

3.4.2.dd. Full details of any contingent liabilities and off-balance sheet financing arrangements.

Not applicable, the applicant is not yet incorporated.

3.4.2.ee. The applicant must also provide audited accounts of the applicant company for the most recently completed financial year. If these are not yet available, audited accounts for the previous financial year, together with any interim financial statement, and draft accounts or management accounts for the most recent financial year should be provided.

If the applicant's financial position is supported by a guarantee, the latest available audited accounts of the guarantor should also be provided.

Not applicable, the applicant is not yet incorporated.

Where the applicant is not yet incorporated, the following must be provided:

3.4.2.ff. Full details of the proposed capitalisation plan including the proposed timing and current status of the proposals.

Please see the Joint Venture Participants Subscription and Shareholder Agreement, outlining the proposed total investment of €25m, split €10m equity and €15m capital contribution.

3.4.2.gg. Full details of the financial interest of each proposed investor in the applicant company.

The proposed investors in **EasyTV** are:

- RTÉ Commercial Enterprises Limited; and

- Irish DTT Holdings Limited

It is currently proposed that both companies would hold a 50% stake in the Applicant. The proposed shareholders reserve the right to include an additional shareholder(s) in **EasyTV**.

3. Evidence

In providing supporting evidence, the applicant must demonstrate so far as possible that sufficient resources are available or will be forthcoming.

<u>Where new share capital is to be raised</u>, the following should be provided:

3.4.2.hh. A clear statement of commitment from investors including details of the timing and amount(s) to be made available.

Please see attached Board Minutes in Appendix 10.

3.4.2.ii. Written evidence that arrangements for the provision of new equity are achievable including details of any pre-conditions or other obligations that must be met. For example:

(i) Where existing corporate shareholders are to subscribe for further equity, a Board minute approving their investment should be provided.

Please see attached Board Minutes in Appendix 10.

(ii) Where new capital is to be raised in the market, a comfort letter from financial advisers or stockbrokers confirming that such a capital-raising exercise would be possible assuming no material change in current market conditions.

Not Applicable

3.4.2.jj. Where specified investors have committed to subscribe for more than 5 per cent of the applicant's total financing, copies of the most recently available audited accounts together with written confirmation of agreement in principle to making the investment covering:

(i) the amount to be invested;

(ii) the percentage shareholding; and

(iii) any pre-conditions to making the investment.

In the case of private shareholders or where the above is not feasible, investors should provide an independently-verified statement regarding their capacity to invest the required funds.

RTÉ Commercial Enterprises Limited is a subsidiary of Radio Telefis Éireann Authority, its most recently available audited accounts are for the year ended 31 December 2007 and are attached at Appendix 8

Irish DTT Holdings Limited's ultimate parent is Liberty Global Inc, its most recently available audited accounts are for the year ended 31 December 2007 and are attached at Appendix 9

Both proposed shareholders in the Applicant are fully committed in principal to making the investment in **EasyTV** to ensure the successful roll-out of DTT services in Ireland. A written confirmation of this position is included at Appendix 10, Board Minutes for RTÉ and LGI.

Where new borrowings are proposed in whatever form, the following should be provided:

*3.4.2.kk. Written evidence that in principle such arrangements are available. This should be **in the form of a letter of intent** from the principal lenders, covering the following points:*

(i) the amount, type and duration of the facility;

(ii) the drawdown schedule;

(iii) the approximate costs of the facility, within an indicative range;

(iv) any security or guarantee required in support of the facility;

(v) full details of any conditions precedent;

(vi) the principal covenants (including specific details of cover ratios);

(vii) details of warranties and undertakings given under the financing agreements and details of events of default; and

(viii) the length of time required to put the facility in place, including details of any due diligence or prior obligations which would need to be met for the financing to be available.

Not applicable, funds required will be sourced from the shareholders and not external lenders.

In the event that some security or guarantee is required, evidence that this will be available.

In support of their funding proposals, applicants are invited to:

3.4.2.ll. Give a clear commitment regarding the amount of funding (both in absolute terms and as a percentage of the total funding requirement) that would be put in place prior to, or at the time of, the finalisation of the contract;

Following licence award the equity providers are committed to investing €25m, in line with the Subscription & Shareholder Agreement as set out in Appendix C.

3.4.2.mm. Provide a detailed timetable of the steps that need to be taken before the finance is available; and

Subject to satisfactory resolution of appropriate regulatory approval (as detailed in our response to section 3.10.1.b), licence award is the only step that will be required before finance is available.

3.4.2.nn. Express their longer term commitment to the development and continuation of DTT in Ireland, especially under adverse conditions.

The Joint Venture Participants are committed to investing €25m in the project, this investment will contribute to both the initial development and continuation of DTT in Ireland. Our sensitivity analysis has confirmed the robustness of our business case and our

commitment to the project. Both RTÉ and UPC are recognised in the market place and are committed to providing a high quality service to the Irish market.

3.5. 9(2)(c)

Range and type of programme material or compilations of programme material proposed to be included in the multiplex by the applicant and how the applicant proposes to secure the continued inclusion of such material

For this criterion, applicants are required to provide details on their programming strategy, including their provisions for allowing access to channel capacity and accommodating high definition television, and the range and type of programme material being proposed.

Programming Strategy

3.5.1.a. What is the applicant's vision for programme content delivered on the DTT platform?

The key goals of the programming approach are to create a next generation broadcast network that will allow national delivery over air to as broad a population base as possible and to support the viability of the Commercial DTT proposition, (and ultimately therefore the entire platform as a whole), in a capacity restricted environment. This will be achieved by providing popular programming content within an optimum use of spectrum that will appeal to a mass potential audience, balanced with content addressing the specific nuances of the profile of Analogue Free To Air (FTA) switchers.

A commercially successful platform will be ensured by providing popular mainstream programming to compliment the MUX 1 Public Service Broadcaster (PSB) content, balanced across a broad range of genres including the most popular General Entertainment, News, Documentaries, Music and Sports programming. This will include the core UK Terrestrial Channels through an innovative low cost tiering approach, which appeals to a wide potential market and is carefully balanced with specific programming that addresses the demographic profile of the core target market of Analogue FTA switchers.

EasyTV will launch with a bouquet of Standard Definition Channels as the optimum use of scarce available spectrum at launch. **EasyTV** will broadcast certain high profile events in HD with further plans to introduce dedicated HD channels on as the right balance of available capacity, penetration of HD ready TV sets, available HD content and commercial appeal to the core target audience is tipped.

3.5.1.b. What is the strategy for creating and sustaining the mix of content proposed on the multiplex, both at the commencement of transmission and over the duration of the multiplex contract?

The parties behind **EasyTV** have considerable experience in dealing with multiple Content Providers and have built up relationships over time.

As part of our preparations for this application we have approached several Channel Providers who have expressed a strong interest in participating on this platform. Final commercial terms with the various suppliers will be formalised in the event that is awarded

the licence. We have expressions of interest, both written and verbal, from a number of channel suppliers interested in participating in **EasyTV**'s channel selection.

The various commercial aspects of carriage would be formalised in a binding carriage agreement between the Licence Holder and the various channels which would be typically 2 to 3 years in duration.

Prior to expiry of each agreement the parties would enter into renegotiation for renewal of carriage where appropriate. Where agreement can not be reached for continued carriage, then alternative content of similar quality and genres would be sourced from alternative providers.

3.5.1.c. What specific proposals, if any, are there for providing content providers with access to the multiplex in a manner that is fair, reasonable and non-discriminatory?

We are of the view that in order for the entire platform to be a success the Commercial DTT Operator must operate so as to maximise the take-up of its services. Thus, subject to any overriding legal requirements, we will determine the channels carried on the platform in a commercial manner. Channels will be carried based on our assessment of their individual attractiveness to retail customers tempered by the desire to ensure that, given the limited capacity available, the platform as a whole has an appealing balance of channels. Within this framework we will provide content providers with access in a fair, reasonable and non-discriminatory manner.

3.5.1. d. Please detail the policy, strategy and specific proposals, if any, for the carriage of content in high definition (HD) format over the short (1-3 years), medium (3-5 years) and long term (5-10 years).

The Applicant strongly supports the Policy of the BCI ensuring that minimum STB specification standards as set out by BCI support HD into the future.

Short Term HD Plans (1-3 years)

The Applicant proposes to launch the service with a pack of Standard Definition (SD) broadcast channels with certain incremental High Definition ("HD") programming to be carried on an-event basis during the initial period of the trial.

Upon the addition of extra MUX capacity on the platform (post analogue shut down), the Applicant will introduce new dedicated HD channels to the service. The Applicant believes that while it will be useful to provide certain bespoke event-based content in HD, it would be premature to broadcast dedicated HD content at launch, the rationale for this staggered approach is as follows:

- The limited capacity available on the platform and the incremental capacity required for HD transmissions

- The limited availability of indigenous HD broadcast content at point of launch

- The limited availability and high monthly cost of procuring of UK & International HD content at point of launch

- Given the profiling of the target market it is anticipated that HD will not be a significant driver to the platform

- The limited availability of High Definition ready TV sets amongst the target analogue user base

- The early adopters of HD would be in the main already Digital TV subscribers who will own modern HD ready TV sets and who have already signed up to Satellite HD services and also Cable HD services, which are expected to be well established by the launch timeframe

Medium (3-5 years) and long term (5-10 years)

Given all of the above it is important to launch the initial service to deliver the most appealing proposition given capacity constraints and roll out dedicated HD channels at an appropriate stage as HD becomes more mainstream:

- More HD content becomes available, notably Irish Terrestrial Content in HD

- The penetration of HD TV sets grows to critical mass in the market

- The cost curve for sourcing HD content bottoms out

Range and Type of Programme Material or Compilations of Programme Material

Applicants are required to set out in detail the programme content to be carried on the multiplex and the rationale for the mix proposed4. Issues that must be addressed include, but should not be limited by, the following:

3.5.1.e. What is your assessment of viewing patterns of audiences in Ireland, both current and historic, and how has this informed your programming proposals?

An analysis of viewing patterns in the Irish TV space confirms the following key characteristics and trends;

- Sustained high viewing share for Irish FTA PSB channels in particular RTÉ One & RTÉ Two across all platforms which has remained consistently high over time given entry of new channels and growth of digital multi-channel platforms

- Successful emergence of TV3 as a highly watched channel

- Continued significant viewing share for UK Terrestrial services including BBC One, BBC Two, UTV and Channel 4, which continue to be perceived as essential channels for a large proportion of the population, particularly in east coast and overspill areas

- Remaining viewing concentrated on mainstream entertainment channels, mainly Irish opt-versions as carried on UPC's analogue networks and also on additional TVs in Cable Digital homes

- Growing share of digital-only channels, as the digital penetration grows, with the most popular digitals channels being

  – Sky Sports
  – UKTV Gold
  – Cbeebies

- In terms of genres, the heaviest weight of viewing share is concentrated in general entertainment, childrens and sports

- Moreover, although news & documentary channels are considered essential, viewing share remains relatively lower for these categories

Capacity Parameters

DTT capacity is predicated on the availability of 4 National Multiplexes (MUXES) prior to Analogue Switch-Off and Digital Switchover in 2012 (estimated): one National Multiplex (MUX) for Free-To-Air PSB Broadcasters & TV3 (at the discretion of the Minister) and three National MUXES for other Broadcasters.

A further four National MUXES would become available post 2012: one for PSB (primarily High Definition) and one for the use of non-PSB Channels together with two national MUXES which it is understood may be utilised for new distribution and communications technologies, such as DVBH for example.

To allow for a consistent offering to audiences on a Wholesale DTT platform, the Applicant expects that the first 4 national MUXES would generally be broadcast at 64QAM 2/3 mode which gives a Net Bit rate (Mbit/s) of the order of 24Mb/s per MUX (as compared to 18Mb/s per MUX using a 16QAM mode). This in turn has a fundamental impact on the number of 24 hour channel streams that can be accommodated on each individual MUX.

It should be noted that each MUX consumes of the order of 1Mb/s of capacity for System Information (SI) which includes: Program Specific Information (PSI - the tables that identify the combinations of audio, video and data streams that form each programme) Program Association Tables (PAT), Program Map Tables (PMT), Event Information Table (EIT), Logical Channel Numbering (LCN) and Conditional Access Table (CAT). More complicated conditional access systems may push the requirement higher than 1Mb/s.

Content & Packaging Strategy

Set within this capacity context the proposed lineup is a balanced portfolio which will add greatly to the limited choice of content traditionally available to those impacted by the ASO. It contains the majority of the most popular TV channels as detailed in the audience research statistics outlined above.

A proposed selection of 13 channels in the "Mid Pay" Tier (including time share channels) addresses all the key genres of content genres (entertainment, factual, sports, childrens) with a broad range of popular channels.

We are also providing access to the core UK Terrestrials in an innovative low cost tiering "Soft Pay" approach.

The Commercial MUXES 2, 3 and 4 would aim for a wide level (90%+) of national population coverage albeit less than that achieved by the PSB MUXES. It is believed that content on the non-PSB MUXES should include the most watched channels available to an Irish audience.

While some channels may be provided Free-To-Air (FTA) it is clear there will be a level of "Soft Pay", lower value subscription required to be levied for the provision of non-PSB channels. This basic charge may also include provision of Irish National Commercial Radio services and UK National PSB Radio Services.

A "Mid Pay" subscription would need to be levied in respect of additional channels of interest which add to the attractiveness of the overall consumer offering.

Finally it is anticipated that there will be some demand for certain higher cost, "Premium Pay" Channels on the DTT Platform.

"SOFT PAY" MUX 2, 3 and 4

The suggested 24 hour "Soft Pay"/FTA channel streams for MUXES 2, 3 and 4 are set out below. These are all in SD. At this point channel line up is indicative. The participation of all the channels below has been agreed subject to final contract with programmer providers unless otherwise stated.

1. BBC One

2. BBC Two

3. BBC Three

4. BBC Four

5. Channel 4

6. TV3 ABC1 (working title)

7. Channel 6

8. City Channel (time share)

9. Extreme Sports (time share)

"MID PAY" MUX 2, 3 and 4 - "Best of the Rest"

The two children's channels below (10 and 11) require no further bandwidth as they are timeshared with BBC Three and BBC Four allowing for two extra channels to be made available for other content while staying within the bandwidth limits of the three commercial MUXES.

10. CBBC (Time and bandwidth share with BBC Three)

11. CBeebies (Time and bandwidth share with BBC Four)

12. E4

13. MTV

14. Living TV

15. Film4

16. Discovery

17. More4

18. Paramount Comedy

19. A general entertainment channel such as Virgin 1, UKTV Gold, Dave or Sky One, subject to commercial agreement

20. A rolling news channel such as Sky News / BBC News 24 or similar, subject to commercial agreement

21. A rolling sports news channel such as Sky Sports News / Setanta Sports News or similar subject to commercial agreement

22. UK TV History

There will also be bandwidth allocated for System Information, National Irish Commercial Radio Services including Newstalk & National UK PSB Radio Services

"PREMIUM PAY" NON-PSB CHANNELS MUX 2, 3 and 4

The suggested 24 hour Premium Pay channel streams for MUXES 2, 3 and 4 are set out below. These are all in SD unless otherwise stated.

We have held discussions with the two significant current providers of premium pay content to the Irish market in respect of either:

- The supply of premium content should be packaged to consumers as part of an **EasyTV** package, or
- retail provision of premium content by channel provider

These negotiations are ongoing.

23 – 28 inclusive. It is our intention to include five premium sports channels and one movie channel subject to commercial agreement.

23. Premium Sports 1

24. Premium Sports 2

25. Premium Sports 3

26. Premium Sports 4

27. Premium Sports 5

28. Premium Movies

It is our opinion that in the event that **EasyTV** is successful in its application these discussions would be concluded resulting in premium content being made available.

3.5.1.g. What is the ratio of indigenous to non-indigenous services and content proposed?

MUX 1 provides the Irish FTA and other PSB channels and given participation of RTÉ within **EasyTV** this offering will be tightly integrated with that FTA service.

The suggested 24 hour channel streams are set out below:
- RTÉ One
- RTÉ Two
- RTÉ Three Compendium: Repeats / Extra (Mon – Fri) & Sport (Sat & Sun) (time share)
- Oireachtas (time share)
- TG4
- TV3
- RTÉ One Deferred (time-shift)

Regarding the Commercial MUX, where possible, **EasyTV** plans to include indigenous channels that are of suitable mainstream commercial appeal to potential viewers and will support the commercial viability of the Commercial Service and the overall platform as a

whole.   Our indicative launch lineup includes 3 channels out of 9 soft pay channels. Together with the PSB channels on MUX 1, this amounts to 10 channels out of a total of 16 channels in the simplest commercial offering.

Examples include

- TV3 ABC1 (working title)

    TV3 ABC1 builds on TV3's recent repositioning of it news output to deliver a channel which is a contemporary look at Ireland and the world. TV3 ABC1 will deliver a compelling Irish and international schedule of bespoke news and current affairs, as well as drama, comedy and documentary titles from some of the world's best producers. It will complement TV3's current populist, mainstream proposition.

- Channel 6

    An Irish-owned commercial entertainment channel, currently carried on cable & satellite.

- City Channel

    City Channel will provide a range of information and entertainment programmes and will offer daily updates on what's on in each part of the country - cinema, theatre, entertainment, music and arts as well as review and preview programming. The channel will be broadcast on a compendium basis to satisfy all regional requirements.

3.5.1.h. What is the ratio of free-to-air to subscription and/or other pay-TV content?

As per the packaging structure outlined in section 3.5.1g above the content on EasyTV service will be provided through various Pay TV tiers that will complement the FTA channels provided via MUX 1.

3.5.1.i. Please describe the diversity of sources of news, information and current affairs contained within the range and type of content proposed.

Balanced within the context of an overall requirement for a mainstream General Entertainment content offering **EasyTV** places a high importance on the diversity of news, information, documentaries and current affairs as provided as part of our content proposition.

A wide range of news and information content will enhance the commercial appeal of the service based on the profile of the target market to be addressed by the service. Furthermore we support the public sector remit of the national DTT service.

This factual content is balanced with an overall package of channels that provide a broad appeal of general entertainment and other mainstream content. This will ensure universal appeal, rapid adoption of the new platform, and ultimately it's commercial sustainability.

The news and current affairs content may be ramped up across the various phases of the roll out. At launch, given the scarce capacity, the amount of channels already on the FTA MUX and the need to sustain broad populist appeal to kick-start the platform, we are prioritising certain content. As more spectrum is made available it is envisaged that more channels will be provided in this genre.

Launch Phase

News, information, documentaries and current affairs programming

- News Programming within standard channels (BBC /TV3 /Channel 4 etc.)
- A rolling news channel such as Sky News | BBC News 24 or similar, subject to commercial agreement

Other Channels with a high proportion of Factual Programming

- More4
- BBC4
- UKTV History

Radio News
- Newstalk
- BBC Radio 4

Regional Programming
- City Channel – will provide a range of information end entertainment programmes and will offer daily updates on what's on in each part of the country - cinema, theatre, entertainment, music and arts as well as review and preview programming. The channel will be broadcast on a compendium basis to satisfy all regional requirements.

Phase II (Based on additional capacity following Analogue Switch off)

News, information, documentaries and current affairs programming
- Channel South – New Munster variant of City Channel, News and Entertainment channel focusing on the Limerick, Cork and Waterford areas

Community Interest
- Dublin Community TV
- Cork Community TV

3.5.1.j. What level of assistive services is proposed? (Please include a description of the services proposed and comment on the quality of services that might be expected)

Shared Platform Capabilities

Based on a common platform with the operation of MUX 1 by RTÉ, the Commercial platform will support the latest developments in assisted access services including both the Broadcast EPG and the specification of the STB models promoted by **EasyTV**.

(For a more detailed technical analysis of the issues involved in the various access services, please refer to 3.8.1.r.)

The availability of Access Services is typically dependent on the respective broadcasters. The roll out of these services is typically led by PSB Broadcasters as part of their PSB mandate. As such the content proposition includes the major PSB broadcasters in Ireland and UK, and those services will be made available on the platform where the Broadcasters provide such services in their Broadcast stream.

There will also be a focus on supporting accessibility options including:

Subtitles

The product will support DVB subtitles thus allowing users to look up digital text content in an easy-to-use format as integrated into the EPG.

As many of the channels proposed are licenced by Ofcom in the UK, their minimum guidelines are a good indicator as to the level of services provided.

The Ofcom Code on Television Access Services gives effect to section 303 of the UK Communications Act by requiring relevant channels to join public service broadcasters in providing access services. Ofcom has set interim targets that rise progressively towards the ten-year targets set in the Act - 80% of non-exempt programmes for subtitling, 10% for audio description, and 5% for sign language. The interim targets are published on Ofcom's website. http://www.ofcom.org.uk/tv/ifi/codes/ctas/

Under these terms, these channels will be in year 5 of their obligations by DTT launch in Ireland and will have substantially increased their allocation of all access service content at that point. http://www.ofcom.org.uk/media/mofaq/bdc/as_faq/

It should be noted that if a channel's audience share has fallen consistently below the 0.05% threshold or their revenue has dropped, resulting in access services costing more than 1% of relevant UK turnover the channel will not be required to provide access services in the following calendar year.

Signing

With signed programmes, you see a picture of a person signing in a corner of the screen. These are typically carried in the standard broadcast stream of the channel, typically in off-peak hours. With the advent of DVRs and the promotion by **EasyTV** of a branded DVR STB this provides the option to record the off-peak transmissions for replay.

Again Ofcom guidelines suggest 5% of programming be signed under the terms of the UK Communications Act with higher rates for UK PSB channels such as the BBC.

Visually Impaired Audio Description

Audio Description (AD) works like a commentary for people who have difficulty seeing the screen. During the programme a voiceover describes what is shown and happening on the screen during gaps in the dialogue or in silent parts. The infrastructure will support AD thus allowing users to invoke audio description services in an easy-to-use format as integrated into the EPG.

10% of programming from Ofcom channels will be AD enabled with higher rates for UK PSB Channels such as the BBC.

3.5.1.k. How will the range and type of content proposed extend choice to viewers? To what extent will it appeal to a variety of tastes and interests?

The proposed commercial lineup (see below) is a balanced portfolio of up to 28 digital channels (including time shared channels) which will add greatly to the choice of content traditionally available to those impacted by Analogue Switch off who up to now have been limited to reception of RTÉ One, RTÉ Two, TV3 and TG4.

The proposition will remove the historical barriers to adopting digital TV by the analogue users including concerns around perceived complexity, channel quality and cost.

Complementing the national switchoff campaign, **EasyTV** will provide low cost, easy to use access to digital TV for the first time for many viewers.

Furthermore the proposition provides a compelling mass market proposition by compiling a channel bouquet addressing all the main genres with a broad range of popular, high rating channels including the core UK terrestrial channels at low cost of entry.

At this point channel line up is indicative and the final channel lineup is subject to further commercial discussions.

Channel Description Table

(At this point channel line up is indicative and the final channel lineup is subject to further commercial discussions)

Channel & Genre	Channel Provider	Nielsen Ratings Share (N'nal, Ind. All Day)	Channel Licensing Authority	Channel Description
General Entertainment				
BBC One	BBC Worldwide	5.5	BBC Royal Charter	A mixed-genre channel providing a very broad range of programmes to a mainstream audience.
BBC Two	BBC Worldwide	2.7	BBC Royal Charter	A mixed-genre channel carrying a broad range of programmes for a mainstream audience with a particular focus on factual programmes, innovative comedy and drama.
BBC Three	BBC Worldwide	n/a	BBC Royal Charter	A mixed-genre channel aimed primarily at younger adult audiences.
BBC Four	BBC Worldwide	n/a	BBC Royal Charter	A channel providing an intellectually and culturally enriching alternative to mainstream programming on other BBC channels.
Channel 4	Channel 4	3.4	Ofcom	Channel 4 has a remit to demonstrate innovation, experimentation and creativity in the form and content of programmes that appeal to the tastes and interests of a culturally diverse society.
E4	Channel 4	1.1	Ofcom	E4 is an entertainment channel aimed at the 16-35 age group with a lot of new acquired programming from the United States.
Film4	Channel 4	n/a	Ofcom	Film4 shows a mixture of old and new independent, arthouse, British, foreign language and specialist cinema, along with some critically-acclaimed Hollywood films
LivingTV	Virgin Media TV	1.4	Ofcom	The channel's programming is aimed mainly at women and families with a wide range of drama, reality television and comedy.
More4	Channel 4	n/a	Ofcom	More4 is an adult-oriented channel centred around lifestyle, documentary, and arts programming
Sky One	BSkyB	2.3	Ofcom	Sky One is the primary source for debuts of major US TV series and programming unique to the channel.
TV3 ABC1 (working title)	TV3	n/a	BCI (Assumption)	TV3 ABC1 builds on TV3's recent repositioning of it news output to deliver a channel which is a contemporary look at Ireland and the world. TV3 ABC1 will deliver a compelling Irish and international schedule of bespoke news and current affairs, as well as drama, comedy and documentary titles from some of the world's best producers. It will complement TV3's current populist, mainstream proposition.
Virgin1	Virgin Media TV	n/a	Ofcom	Virgin 1 is a mixture of American and British comedy, drama and factual programming.
Dave	UK TV	n/a	Ofcom	Dave is crammed with the very best in quirky quiz shows, cult comedies and cutting-edge entertainment. This channel is aimed at a young male adult audience.

Channel & Genre	Channel Provider	Nielsen Ratings Share (N'nal, Ind. All Day)	Channel Licensing Authority	Channel Description
UKTV Gold	UKTV	n/a	Ofcom	UKTV Gold shows mainly classic BBC entertainment programmes, with a particular emphasis on classic BBC comedy.
Paramount Comedy	Viacom	0.8	Ofcom	A channel dedicated to comedy featuring the best classic comedy TV series, stand-up and sketch shows.
Channel 6	Channel 6	0.7	BCI	Irish-owned General Entertainment channel featuring programming aimed at under 35's.
News, Current Affairs & Documentaries				
Sky News	BSkyB	1.1	Ofcom	A rolling TV news channel providing 24 hour news coverage including the latest breaking news.
BBC News24	BBC Worldwide	n/a	BBC Royal Charter	A 24-hour channel providing news, analysis and other informational programmes.
City Channel	City Channel	n/a	BCI	City Channel programming is a strong mix of lifestyle, entertainment and information with subjects that appeal to local audiences.
Discovery	Discovery	n/a	Ofcom	Discovery provides documentary programming focused primarily on popular science, technology, and history.
UK TV History	VMTV	n/a	Ofcom	UKTV History is a factual channel offering entertaining programming presented by engaging experts, who bring history to life with absorbing story-telling.
Sports				
Sky Sports News	BSkyB	n/a	Ofcom	A rolling TV sports news channel providing 24 hour sports coverage including the latest breaking news.
Extreme Sports (TS)	ChelloMedia	n/a	Ofcom	A channel dedicated to extreme sports and the lifestyle that goes with it.
Setanta Sports News	Setanta	n/a	Ofcom	A rolling TV sports news channel providing 24 hour sports coverage including the latest breaking news.
Music				
MTV	Viacom	1.0	Ofcom	MTV combines some of the most original, innovative and provocative entertainment with exclusive videos and live performances to earn it the title of the world's most famous music channel. It attracts a thrill seeking audience with its maverick attitude and ingenious creation of some of the most popular and groundbreaking programmes
Childrens TV				
CBBC (TS)	BBC Worldwide	n/a	BBC Royal Charter	A mixed-schedule channel for pre-teen children.
Cbeebies (TS	BBC Worldwide	n/a	BBC Royal Charter	A channel providing a range of programming to educate and entertain pre-school aged children and their carers.

The proposed commercial lineup is a balanced portfolio of up to 28 digital channels (including time shared channels) which will bring the best of Digital TV content, that typically has been only available on Cable and Satellite, to a much wider potential audience. The proposition will remove the historical barriers to adopting digital TV such as concerns around perceived complexity, availability, channel quality and cost. Complementing the national switchoff campaign, **EasyTV** will provide low cost, easy to use access to digital TV for the first time for many viewers.

Indigenous Content

As capacity is added to the platform, DTT will have more scope and flexibility for Irish Content such as Ireland-specific Community TV. This contrasts to UK-based Satellite operators where the incremental infrastructure costs of uploading Irish- and region-specific content to UK & Irish transponders tends to be prohibitive. One example of this flexibility will be the opportunity of offering Irish Sports events in HD.

"Soft Pay" UK Terrestrials Tier

In an innovative packaging approach the proposition will provide access to the popular UK Terrestrial channels at a low cost of entry.

3.5.1.m. Please provide details of the proposed broadcast schedule illustrating how content would be fitted into an overall schedule of broadcasting across the multiplex and indicate the time/s of the day and the day/s of the week on which each service will be broadcast and the target audience(s).

The attached matrix outlines graphically the broadcast hours of the proposed TV channels on the service.

Channel Broadcasting Hours – Non Premium

3.5.1.n. For each television channel/compilation of programme material, please detail the period for which it is proposed such material will be carried. Please indicate whether the proposed material has already been secured by way of formal agreement between the applicant and the source of the content.

Length of term for the carriage of various channels will be determined with the various suppliers as part of the formal carriage agreements in the event **EasyTV** is awarded the licence. The typical carriage terms range between two and three years for renewal.

As part of this application we have secured letters of interest from content providers, reflecting their interest in supplying content on the new platform.

We have existing commercial arrangement with all the major Content Suppliers providing programming on Irish TV platforms.

Final commercial terms with the various suppliers will be formalised in the event **EasyTV** is awarded the licence. The various commercial aspects of carriage would be formalised in a binding carriage agreement between the licence holder and the various channels. The legal agreement will document the commercial and other terms as follows:

- Parties
- Term
- Launch Date
- Channel Description(s) & Hours of Transmission
- Carriage Rights
- Carriage Obligations
- Tiering & Geographic parameters of Distribution
- Subscriber Volume and Minimum Guarantees (where applicable)
- Warranties with regard to Broadcast Licenses required by the Broadcaster in the Territory
- Warranties with regard to Copyright Rights Clearance by the Broadcaster in the Territory

- Commercial Terms & Consideration, typically Carriage Fees payable per Subscriber per Month

There are certain rights clearance issues regarding Irish DTT for UK Terrestrial channels such as the BBC Channels and Channel 4 which are not covered under the existing Cable and Satellite clearance models. The various stakeholders, including channels, copyright owners and potential operators, are working together to resolve these issues at present and it is expected that the rights clearance model for Irish DTT will be in place in advance of launch of the platform in 2009.

3.5.1.o. Where the continued inclusion of a channel/compilation of programme material has not been secured, what are the applicant's proposals for either (i) securing the material's continued inclusion and the period of time for which such continued inclusion will be sought or (ii) obtaining alternative content?

Length of term for the carriage of various channels will be determined with the various suppliers as part of the formal carriage agreements once in the event **EasyTV** is awarded the licence. The typical carriage terms range between two and three years for renewal.

Should the operator and the channel be unable to agree renewal terms then the operator shall enter into discussions with other channel providers to source alternative content of similar genres and quality that maintains the appeal of the retail proposition. There is a wide range of alternative channels and channel providers available to choose from.

3.5.1.p. Multiplex operators are responsible for ensuring that all content carried on their multiplexes are licensed. Please confirm that all content is appropriately licensed or, if appropriate, describe what plans you have to address this requirement.

The Applicant will insist on guarantees from each channel as regards licensing in the Territory as standard practice. As a standard core element of the carriage agreement between the Commercial DTT Operator and the Channel Provider, the Channel Provider warrants that the Channel has received all necessary Licences required to broadcast in the Territory.

The answer to section 3.5.1.k above lists the relevant licensing status of the various proposed channels. The majority of the channels listed in our application are already broadcasting in the Territory either via Cable or Satellite and the majority of these are OFCOM licensed, therefore available for distribution in the Irish Terroriry under auspices of the TV Without Frontiers Directive (soon to be replaced by the Audio Visual Services Directive)

The Channels City Channel, Channel 6, TV3 & DCTV are BCI licensed.

It is expected that new indigenous channel concepts would typically seek a BCI Licence before commencing broadcasting.

3.5.1.q. Where relevant, applicants must explain the type of content proposed in HD format and comment on the steps it proposes to take to source and fund the content. The applicant should explain how it proposes to accommodate such content on the multiplex and describe the impact that carriage of HD content may have on the range and type of programming going forward.

The Applicant strongly supports the Policy of the BCI ensuring that minimum STB specification standards as set out by BCI support HD into the future.

The Applicant proposes to launch the service with a pack of Standard Definition (SD) broadcast channels with certain incremental HD programming to be carried on an-event basis during the initial period of the trial. Upon the addition of extra MUX capacity on the platform (post analogue switch off), the Applicant will introduce new dedicated HD channels to the service. The Applicant believes that while it will be useful to provide certain bespoke event-based content in HD, it would be premature to broadcast dedicated HD content at launch, the rationale for this staggered approach is as follows:

- The limited capacity available on the platform and the incremental capacity required for HD transmissions

- The limited availability of indigenous HD broadcast content at point of launch

- The limited availability and high monthly cost procuring of UK & International HD content at point of launch

- It is anticipated that HD will not be a significant driver to the platform given the profiling of the target market

   a) The limited availability of High Definition ready TV sets amongst the target analogue user base.

   b) The early adopters of HD would be in the main already Digital TV subscribers who will have modern HD ready TV sets and who have already signed up to Satellite HD services and also Cable HD services, which are expected to be well established by the launch timeframe.

- Given all the above it is important to launch the initial service to deliver the most appealing proposition given capacity constraints and roll out dedicated HD channels at an appropriate stage in the future as HD becomes mainstream:

   a) More HD content becomes available, notably Irish terrestrial content in HD.

   b) The penetration of HD sets grows to critical mass in the market.

   c) The cost curve for sourcing HD content bottoms out.

3.5.1.r. Please describe the extent to which the programme proposals utilise spectrum efficiently and comment on the expected levels of audio and visual quality and explain how this has influenced the rationale behind your programming strategy.

To allow for a consistent offering to audiences on a Wholesale DTT platform, **EasyTV** that the first 4 National MUXES would generally be broadcast at 64QAM 2/3 mode which gives a Net Bit rate (Mbit/s) of the order of 24Mb/s per MUX (as compared to 18 Mb/s per MUX using a 16 QAM mode). This in turn has a fundamental impact on the number of 24 hour channel streams that can be accommodated on each individual MUX

3.5.1.s. Please describe what non-programme data would be included in the proposed service(s) and the amount of capacity allocated to it.

This question is answered in greater detail on 3.8.1.o, however it is noteworthy that to optimise coordination and consistency, System Information (SI) will be cross-carried across all MUXES. This will include service information and schedule data.

A capacity allocation of max 500Kbps per multiplex will be assigned for System Information (SI) data which will include : Program Specific Information (PSI - the tables that identify the combinations of audio, video and data streams that form each programme) Program Association Tables (PAT), Program Map Tables (PMT), Event Information Table (EIT), Logical Channel Numbering (LCN) and Conditional Access Table (CAT), Entitlement Control Messages (ECMs) and Entitlement Management Messages (EMMs).

An engineering channel will be provided on one of the multiplexes for provision of over-the-air (OTA) software downloads to receivers. A capacity allocation of max 500Kbps will be assigned to the engineering channel.

National commercial radio stations and UK PSB radio stations will be carried. A capacity allocation of max 500Kbps per multiplex will be assigned for carriage of radio services.

Interactive broadcast data services including the enhanced (broadcast) EPG application will be carried on all multiplexes. A capacity allocation of max 500Kbps per multiplex will be assigned for carriage of interactive data services.

Access services (subtitling, audio description etc) will be carried on all multiplexes. A capacity allocation of 500Kbps will be assigned for carriage of access services.

All remaining multiplex capacity will be assigned for carriage of television services.

Please demonstrate how your proposals for programming are supported by relevant and appropriate market research, cross-referring where appropriate to your responses to section 3.4.2, the analysis of the marketplace.

The Market Assessment Study as detailed in Appendix A provides an integrated analysis of the target market for the new service, the applicant's channel proposition and audience ratings by channel.

3.6. 9(2)(d)

In the case of a television multiplex, the proposals by the applicant for promoting the acquisition by persons in the proposed coverage area of equipment capable of – (i) receiving all of the television multiplexes available or expected to be available in that area, including the national multiplex referred to in section 3(2)(a), and (ii) enabling such persons to keep themselves informed of the choice of programme material included in those multiplexes

To demonstrate their proposals in relation to this criterion, applicants are requested to provide information in two parts dealing respectively with:

• reception of all television multiplexes; and

• keeping informed of choices.

3.6.1. Reception of all television multiplexes

3.6.1.a. Describe generally your strategy for promoting the acquisition of equipment capable of receiving all multiplexes available or expected to be available in the coverage area proposed.

EasyTV has developed a national communications strategy and a retail sales plan designed to inform members of the public and the retail trade of DTT (what, how and when) rollout dates and information on how to obtain the equipment necessary to receive the **EasyTV** Digital Service.
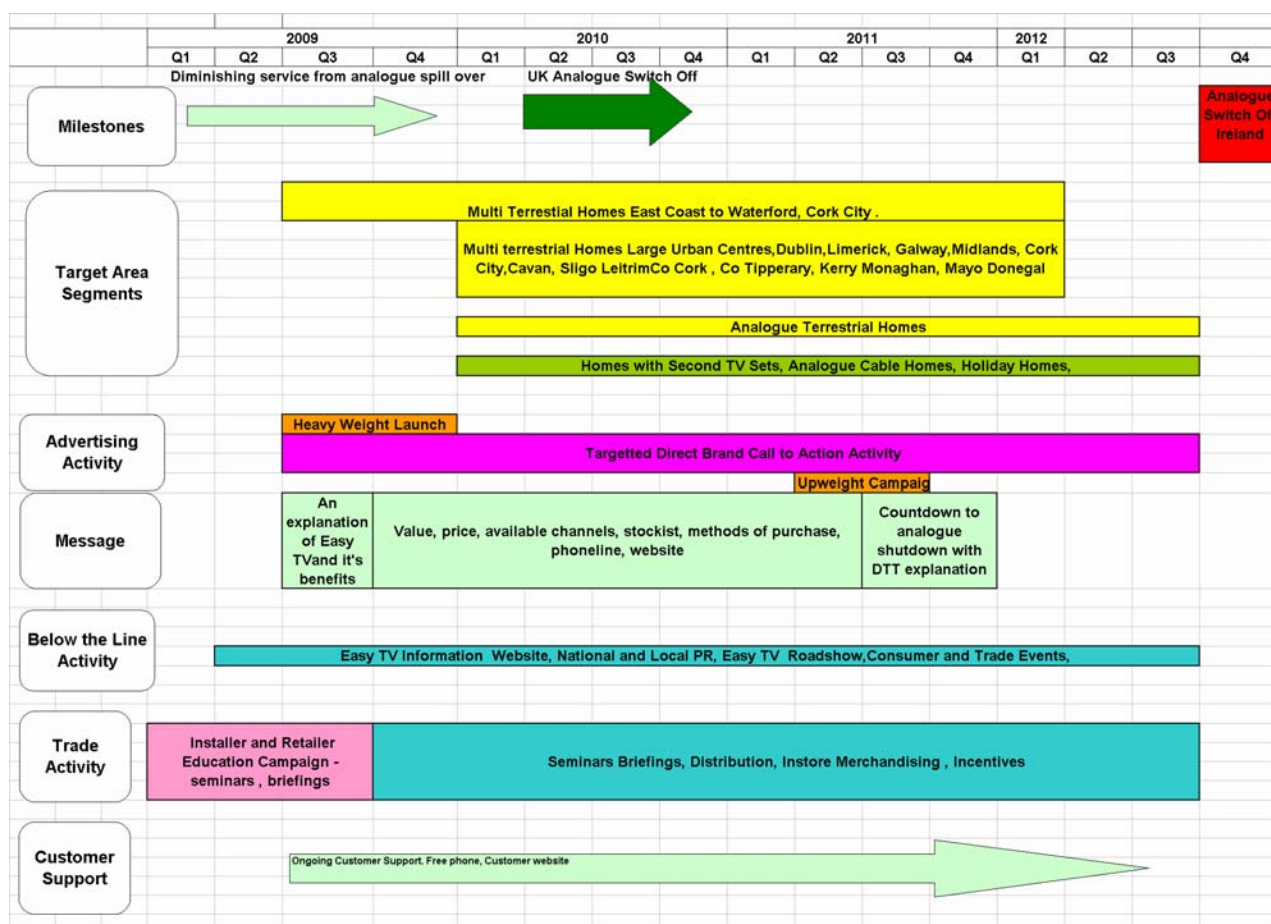
Marketing Plan

Q3 2009 Awareness Launch –Understanding DTT

A focused awareness campaign to both the public and the trade on the DTT service will be a critical success factor in achieving the targeted penetration levels for the service, so priority will be placed on this as part of the communications strategy. It is envisaged that this education campaign will dovetail with any planned government awareness initiative to promote the DTT service as a whole. We will ensure high levels of impact from this activity since it is vital to present DTT as a real and credible alternative to cable or satellite from the outset.

The objective for the launch period will be to educate consumers on the overall DTT service and on the access devices necessary to avail of the service ie: Set Top Boxes and additional access devices. It is envisaged that this campaign will also enhance awareness of the FTA service.

Targetted Brand Activity Q4 2009/2011 – How and when to avail of EasyTV

A Call to Action campaign will be rolled out in conjunction with the awareness campaign to leverage launch awareness by quickly moving into targeted sales areas to sell the Set Top Boxes and channel Packages

Of primary importance will be large urban centres including the main cities in the East coast to Waterford, Cork City, and the Midlands as these will be the first to have a disintegrated analogue service as UK analogue is switched off

The message will focus on the overall package on offer, paying particular attention to the core product attributes and the uniqueness of the **EasyTV** proposition. Key drivers will be information on geographical availability rollout strategy, value message, ease of access to a quality distilled channel package. It will include a direct call to action – a phone number, website address and details of where to buy the set top box locally

The consumer message in both phases will reinforce the Core Proposition of the product which is a select distilled choice of DTT packages, including FTA Irish Channels, that truly reflect viewers core channel preferences, easily aquired through retail outlets. In addition the future proof components of the Set Top Boxes that offer credible benefits to the consumer will be encapsulated:

Digital TV – Accessed through your Set Top Box – HD enabled, One Touch record through DVR, EPG, Plug in access compatible with your HDTV.

Digital TV Made Easy - Easy to Buy, Easy to Install, Easy to View
Channels that you watch from just €49.$_{00}$ for six months
Available to buy through selected outlets Nationwide.

Details Free phone 0123456
Visit our website www.EasyTV.ie

Promoting the acquisition of equipment will fall into the Call to Action Phase of the brand marketing campaign. This Plan would be rolled from Q1 2009 focusing primarily on educating the retail trade and installer network, and then moving into a national awareness campaign commencing in Q3 2009 using a number of communication vehicles to reach both the consumer and trade to ensure the acquisition of equipment necessary for easy facilitation of digital switch over.

Trade Marketing Plan

The Launch and Call to Action campaigns will create the necessary consumer " Pull " to support the retail sales strategy.   The retail plan would be rolled from Q1 2009 focusing primarily on educating the retail trade and installer network, and then moving into an in-store sales strategy Q3 2009 in time for a Christmas launch to sell Set Top Boxes and to up-sell the channel packages. It is envisaged that the FTA STBs will benefit from this promotion at retail level.

This activity will focus on a regionalised Trade Marketing Campaign with the overall objective of cementing Distributor, Retail and Installer partnerships to optimize product availability, in-store visibility and customer support.

Installer and Retailer Education programme

Following initial discussions with CEDA, it is apparent that a Retail and Installer education programme must commence in advance of the Consumer Rollout to ensure that all channels are primed to receive the STB products and have a full understanding of the service.

EasyTV has access to a proprietary list 450+ installers around the country (Appendix H). These installers are contacted by consumers on an ongoing basis when they have problems with their analogue reception, and they provide an aerial repair and installation service. Some of these installers are full-time installers or technicians; others are retailers who

provide a local installation service. It is envisaged that this network will be crucial in providing the installation support network necessary for a smooth rollout of the service.

Information on transmission rollout will be communicated on an ongoing basis through this network, so that take up can be expedited on a rolling basis as the service progresses.

In addition, this panel would be fully equipped to act as resellers of the product to their local customer base. Any additional training on product installation would be supplied as required

An outline of the scope and regional distribution of this installer's network is illustrated in the table below.

County	# Installers	County	# Installers
Carlow	7	Longford	6
Cavan	9	Louth	29
Clare	8	Mayo	28
Cork	69	Meath	14
Cork City	23	Monaghan	10
Donegal	24	Offaly	4
Dublin	20	Roscommon	7
Galway	25	Sligo	8
Kerry	29	Tipperary	26
Kildare	7	Waterford	17
Kilkenny	7	Westmeath	7
Laoise	4	Wexford	20
Limerick	2	Wicklow	17
Leitrim	22		
TOTAL			**449**

The following gives an example of the type of ongoing information that would be disseminated to the installer network, on Set Top Boxes, coverage, transmission etc. This information would be disseminated via Direct Mail, email and through regular regional meetings.

Retail Distribution

EasyTV has supplied a brief to potential distributors outlining the service levels required to ensure an effective distribution to the retail base. The operational and marketing services required will cover but are not limited to:

- Technical Support

- Shipping to retailers and installers nationwide

- Returns

- Storage

- Account Management

- Product Launch to the retail base Marketing Support

- Merchandising

- Customer Help Line

- handling of web sales

In addition to the installer network, it is estimated that there exists a potential core retail base of approximately 400 retailers, and this number is comprised of Independents, wholesalers and multiple retail groups.

The regional distribution of CEDA registered retailers is outlined is outlined below:

County	# RETAILERS	County	# RETAILERS
Carlow	4	Longford	7
Cavan	9	Louth	17
Clare	8	Mayo	15
Cork	46	Meath	8
Donegal	12	Monaghan	5
Dublin	83	Offaly	5
Galway	23	Roscommon	9
Kerry	26	Sligo	7
Kildare	11	Tipperary	17
Kilkenny	10	Waterford	13
Laois	4	Westmeath	8
Limerick	2	Wexford	13
Leitrim	21	Wicklow	14
TOTAL			**397**

A comprehensive retail education programme will be rolled out to the retail trade. In the case of multiple electrical retailers, head office buy in will be necessary to ensure that information is cascaded down to shop floor level. Details on retailer margins, channel support and incentives will be negotiated at this stage to ensure that all elements are in place for an effective launch and rollout. It is envisaged that contact will take the form of initial training blitz to ensure mind share of sales staff, followed by ongoing bi-monthly training of staff.

Retail Launch Rollout

EasyTV sees the retail and installer involvement as pivotal to the success of the venture, therefore the offering to the retailer and installer will cover the following areas to ensure the "push" to the consumer is optimised and sales targets are reached. **EasyTV** has made provision for:

- A fair retail margin

- Allowance for marketing support

- **EasyTV** "Roadshow" to educate retailers nationwide

- Trade PR and Trade Events promotion

- Provision for Packaging and FDU units to promote the offering instore

- Strong ATL advertising campaign to promote the concept and drive footfall into the stores

- In store merchandising on a monthly basis to ensure the prominence of the offering in stores

- Initial training blitz of the selected retail channels to ensure mind share of the sales staff

- Ongoing bi- monthly training of sales staff as there is a high % of seasonal staff turnover

3.6.1.b. How will you ensure that consumers can obtain equipment that meets or exceeds the functionality requirements set out in section 2.2.2?

EasyTV will support and encourage the development of a competitive horizontal market for supply of set top box and integrated digital TV receivers that meet the functionality requirements as defined by the BCI. However to guarantee the availability of suitable equipment at launch of the service, **EasyTV** will specify and procure the development of a range of proprietary STBs that fully match the BCI requirements. By taking this approach, **EasyTV** will obtain economies of scale in the manufacturing of the STBs thereby ensuring that the cost to the consumer is kept to the absolute minimum.

EasyTV will also provide consumers with the option of a CA module to use with IDTV's or third party STBs, as and when these become available in the market.

EasyTV has met with the CEDA membership to discuss supply of compatible receiver product into the Irish marketplace, and consulted with a number of non-CEDA affiliated manufacturers.

EasyTV has obtained proposals from three manufacturers for production of: (i) a set-top box product, and (ii) a DVR product, that fully comply with the functionality specified by the BCI, namely:

- Capable of receiving displaying FTA content and content from all BCI-licensed multiplexes

- Support for MPEG 4 high definition compression format

- Support for MHEG 5-capable middleware applications

- Subtitling-enabled

In addition to the above, **EasyTV** has specified embedded Nagravision Conditional Access and an Ethernet port to support return path functionality in the future.

Proposals received from the manufacturers in question indicate that the retail cost of a set-top box product meeting the above specification in Q3 2009 will be €149, and the retail cost of a DVR product meeting the above specification (with 160GB HDD) will be not more than €249.

By embedding CA, **EasyTV** has reduced manufacturing cost of the STB by approximately €20 (i.e. saving of €30 on retail price) and eliminated the need for a CAM module thereby saving consumer a further €49 which is the current retail price. By taking this approach **EasyTV** has reduced the total cost of STB acquisition to the customer by up to a third.

Consultation with the manufacturers in question indicates that a downward price trend of 15% p.a. can be considered a realistic assumption for products of this nature. This can be attributed to decreasing component costs, manufacturing economies of scale, and greater price competition in the retail market.

Based on the above, the projected retail cost for DTT STB and DVR product over the period 2009-2013 is shown on the following graph.

Price Curve for DTT Access Devices

Retail price (€)
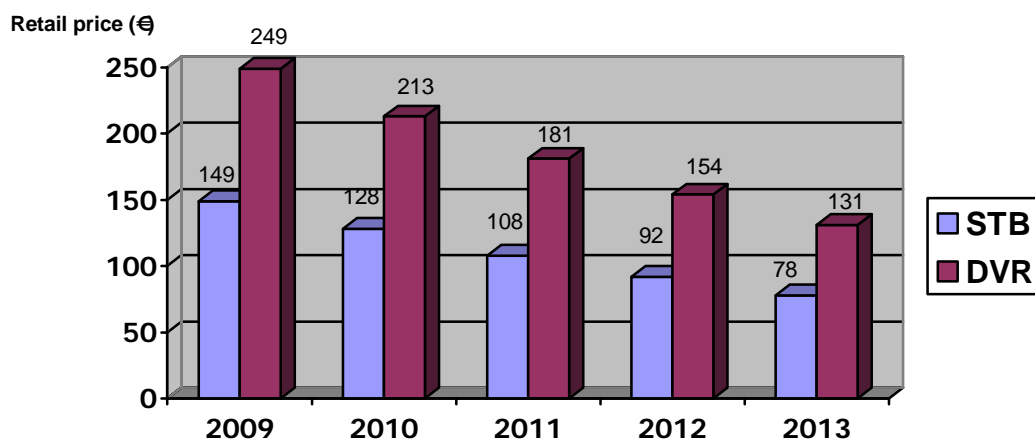
The STB and DVR proposals obtained by **EasyTV** are included in Appendix I.

With regard to Integrated Digital Television (IDTV) products, a number of CEDA manufacturers have indicated that they intend to produce MPEG4 high definition products for launch in the French market in late 2008. These manufacturers have indicated that their IDTV products could be readily adaptable to meet the specification set out above, as they are manufactured with an embedded MHEG5 chipset. The MHEG5 middleware stack could be enabled by way of country code selection during the product commissioning process. Retail pricing of MPEG4-enabled IDTV product is likely to be similar to current MPEG2 pricing (due to price competition, additional manufacturing costs will be absorbed by manufacturers and at retail).

All IDTV products supplied into the EU must contain a Common Interface (CI Slot). Due to security issues that have arisen is the past with CI-based Conditional Access Modules (CAMs), a consortium of manufacturers have specified a more secure common interface standard called CI+. **EasyTV** understands from CEDA that the CI+ standardisation process is due to be completed in the coming months, and that CI+ complaint product will be available in 2009.

On the understanding that CI+ enable receivers will be available in 2009, **EasyTV** propose that the Nagravision CA system deployed will only be available on CI+ enabled CAMs. Thus only receivers equipped with CI+ slots or embedded CA will be able to receive **EasyTV** services. This measure is intended to make the DTT platform in Ireland is as secure as possible, and to future-proof the receiver products deployed in the market.

EasyTV will make both STBs and DVRs available to consumers through a variety of channels including a national network of approximately 850 retailers and installers. In addition, consumers will be able to order the access equipment via the Internet or via a telesales number. **EasyTV** would be willing to undertake to make its STBs available through this distribution channel for consumers just wishing to access the FTA service only. In doing so, **EasyTV** would ensure that FTA only consumers have easy access to low cost STBs that fully meet the BCI specification.

EasyTV believe that a comprehensive equipment compliance testing and certification programme is essential for equipment supplied into the Irish market meets or exceeds the functional requirements set out in 2.2.2 of the BCI Guide to Submissions. This will reduce

the likelihood of interoperability issues arising with equipment deployed in the marketplace, and in turn help to grow consumer confidence in the new platform.

EasyTV understand that CEDA also strongly support the need for a comprehensive compliance and certification programme, and would require this to be in place by the end of Q3 2008 to ensure supply of complaint receiver equipment into the Irish Market in 2009.

EasyTV propose to liaise with RTÉ, the BCI and other industry stakeholders to finalise the service and receiver specifications at the earliest possible opportunity, and to distribute these to CEDA members and other manufacturers immediately thereafter.

EasyTV, along with RTÉ, the BCI and other industry stakeholders, will put in place a compliance testing and receiver certification programme. This will include the specification of a compliance logo that would be licensed to manufacturers whose products comply with the agreed certification standards. Only products that have passed the compliance and certification programme will be licensed to display the compliance logo.

EasyTV proposes to engage the DTG Test Facility in the UK for compliance testing of receiver products for the Irish market. It aims to put this in place by the end of Q3 2008.

DTG Testing Limited was setup by the Digital Television Group in UK to carry out interoperability testing on behalf of the digital TV receiver industry. DTG Testing Limited has considerable experience in compliance testing of DTT, having tested hundreds of DTT receiver models prior to their launch into the Freeview receiver market in the UK. DTG Testing Ltd also provides interoperability testing services to platform operators outside of the UK. Current clients include Freeview NZ and HK Government.

The DTG Testing Ltd is a very suitable candidate for testing of product for the Irish DTT market, as the structure of the SI transport stream that will be deployed on the multiplexes in Ireland is likely to be similar to that currently deployed in the UK. Furthermore the DTG Test Facility experience in testing for MHEG middleware compliance in receivers will be highly advantageous, as MHEG compliance testing will be a very important and effort intensive part of the interoperability test programme. DTG Testing Ltd will be well placed to test for new technical standards likely to have an impact on the Irish DTT market, such as the MHEG Interactive Return Path standard.

A receiver compliance test programme will include the following:

- RF testing

- MHEG API testing

- Common Interface testing

- SI and PSI signaling operations, including EPG

- Audio and video testing, including AFDs

- Subtitle and audio description stream testing

Normally receiver compliance testing takes up to 7 working days. Of these 3-4 days is allocated to MHEG API testing.

In the UK, equipment manufacturers bear the cost of product compliance testing and certification. **EasyTV** envisages that a similar model would exist in the Irish DTT market.

In addition to receiver compliance testing, another consideration is the compliance testing of all MHEG applications broadcast on the Irish DTT platform. **EasyTV** propose that all MHEG applications broadcast by it or its channel partners will be compliance tested prior to deployment. Typically this would entail testing the MHEG application against a farm of certified receivers as deployed in the target market.

DTG Testing Ltd has indicated that they can provide an Irish DTT receiver test farm facility to **EasyTV** if required.

3.6.1.c. If you propose to employ Conditional Access (CA), please describe your approach to supplying the means of reception to authorised viewers (e.g. the supply of a proprietary set-top box, a CA Module, a decoder card etc.) and please provide the following information:-

EasyTV will support the use of third party STBs that fully meet the minimum specification as defined by BCI and which have a slot-in CA module (supporting the latest CA+ standard). This will allow **EasyTV** to supply viewers using third party STBs with a **EasyTV** CA+ sleeve that slots into the CA+ module and enables the STB to access encrypted **EasyTV** content. **EasyTV** will also supply all its Pay TV customers, whether using third party or proprietary STBs, with a smartcard that authorises that customer to access specific pay channels to which they have subscribed. Smartcards will be supplied at no additional cost to customers subscribing for **EasyTV** Pay TV services. However customers will incur an additional cost for the provision of a CA+ sleeve for use with third party STBs or IDTVs.

(i)   How will your proposed implementation facilitate interoperability between multiplexes, such that viewers may receive all available DTT program services on a single receiving device (subject to obtaining the necessary authorizations)?

EasyTV is bidding for all three multiplexes and, if successful, will deploy a single CA system which will provide seamless access to all content both FTA and encrypted. **EasyTV** will adopt an open access policy for all content providers with a wholesale model that requires all content providers to use a common CA system.

(ii)   Outline how inconvenience to consumers can be minimised in cases where more than one type of CA system may be deployed?

EasyTV's support for third party STBs with plug-in CA modules will ensure that, should other CA systems be introduced in the future (e.g. when multiplexers 4 and 5 are awarded), then viewers could use a third party STB with a CA module to access different CA platforms including **EasyTV**. This would inevitably require the viewer to swap out their CA module when switching from one CA system to another (i.e. when switching from programs on one multiplex to another multiplex). It is possible that manufacturers may well offer STBs with two CA module slots but this would inevitably increase the cost of the device and may well be uneconomic given likely volumes.

(iii)   Confirm that any equipment proposed will meet the functionality requirements set out in section 2.2.2 and describe any additional features that exceed the core requirements for DTT receivers.

EasyTV will only supply proprietary STBs that fully meet the minimum standards defined by the DTT Pilot Stakeholders Group (PSG) and endorsed by BCI which currently means:

- capable of receiving displaying FTA content and content from all BCI-licensed multiplexes

- supporting MPEG 4 high definition compression format

- supporting MHEG 5-capable middleware applications

- enable sub-titling

In addition **EasyTV** would include an Ethernet port as part of all its STBs to enable the deployment of interactive digital applications in the future.

(iv) Confirm if the receiving equipment will be rented, sold, provided free-of-charge or subsidised.

EasyTV customers would have the option of purchasing a **EasyTV** proprietary STB or indeed any other third party STB that meets the BCI minimum specification. **EasyTV** will however offer customers the option of renting a STB subject to a minimum contract period.

EasyTV will give customers a choice between a taking standard STB and the latest generation of personal video recorders (DVR) which have integral STB capability.

EasyTV plans to subsidise the cost of the DVR to €149 for customers subscribing to the "Mid Pay" pack.

(v) Provide details of any proposals you may have in respect of associated customer support services (e.g. hotlines, repairs) and billing- and conditional access-related services to the consumer.

EasyTV will provide a postal repair service, for all **EasyTV** STBs still under warranty, with replacement within 7 days following inspection/assessment that the device has not be damaged or tampered with. If the STB device is outside warranty or has been damaged then **EasyTV** will pass-on the cost of repair to the customer (subject to economic viability of repairs). Where customers are renting STBs then **EasyTV** will replace these by return of post at no cost (subject to proviso that device has not been damaged or tampered with).

EasyTV will provide a customer hotline covering all aspects of its service offering and billing. Customers will also have Internet access to enable to view their bills, to order additional STBs, or to upgrade/downgrade their service packages as well as to communicate with **EasyTV** customer services agents.

(vi) Confirm the status of ownership and operability of any receiving equipment upon termination/ suspension of a subscription contract. (Please confirm whether or not the equipment will continue to receive FTA services in such an event.)

Where customers have purchased a STB then it remains their property at all times although they would be required to return the **EasyTV** smartcard. The same would apply to customers renting a **EasyTV** if their minimum contract period had expired. However if a rental customer was terminated or suspended prior to expiry of contract the **EasyTV** would retain ownership rights in the STB. In all cases the STB would continue to receive FTA services.

Website

EasyTV will build a comprehensive website to inform customers of the what, how and when, service offerings, and costs involved. The website will be designed to be easily navigable with a clear and uncluttered presentation style through-out, and easy-to-read graphical content. There will be a high visibility version for users with impaired vision.

In addition to the Homepage describing the platform as a whole and the available packages, there will be sections on Channels available, Coverage, Reception Equipment, Setting-up, Retail outlets, an Installer section, and a Help and FAQ section.

Homepage: Introduces the platform; packages; receiver types; coverage checker; special offers

Channels: Describes channels avalable ; Online EPG Application

Receivers: Describes different types of receivers available, and approved models

Set-up: Section describing equipment connection, and external antenna connection if required (graphic illustrations)

Coverage: Section enabling viewers to ascertain is coverage available in their area, and reception equipment required (interactive mapping feature)

Where to Buy: Section listing retail outlets and installer directory by locality

FAQ: Knowledge base of commonly reported problems (e.g. reception issues, VHS recording); Helpline numbers

Installer section: More detailed technical information aimed at trade and retail (in FAQ section)

The Coverage section of the website will feature an interactive mapping application that will enable viewers to easily zoom in on their location. An overlay will illustrate if the viewer is in a valid reception area or not. This will be a clear simple to use interface that would not require the public to understand radio technology and/or interpret interference-limited coverage maps.

Screen Grabs of an indicative website are shown below.

The world of digital TV at your fingertips

EASY TV
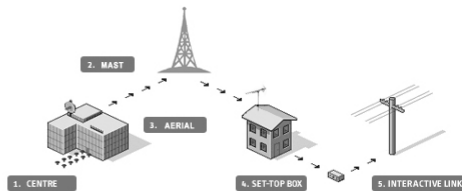
Services | Why Digital? | Contact Us | FAQ | Am I Covered?

Coverage Details

Drogheda, Lo. Louth

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Nulla rutrum lacus id orci. Vivamus leo odio, aliquam sed, tincidunt vel, mollis eget, leo. Vestibulum aliquam malesuada mi. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae;

Digital Television made simple   Retailer Information Bulletin

EASY TV

EASY TV OFFERS CUSTOMERS LOW COST ACCESS TO A RANGE OF THEIR FAVOURITE TV CHANNELS IN HIGH QUALITY DIGITAL FORMAT.

We are pleased to announce that DTT(®) transmissions will commence on 21st October from the Maghera transmission site in Co. Clare. DTT is the new way to enjoy television channels. With four multiplexes, the following channel packages will be available to consumers :

Free to Air	Soft Pack including FTA	Mid Pack Premium Pay including FTA & Soft Pack channels		Pricing and Special Offers
RTÉ One RTÉ Two RTÉ Three TG4 RTÉ One Oireachtas Public Interest Channels TV3	9 Channels including the key UK content of BBC1, BBC2, and Channel 4 priced at €49 for 6 months. ◆ BBC One ◆ BBC Two ◆ BBC Three ◆ BBC Four ◆ Channel 4 ◆ TV3 Extra ◆ Channel 6 ◆ City Channel / Extreme Sports (TS)	21 Channels broad range of the most of the most popular TV channels (includes above Soft Pay channels) priced €99 for 6 months. ◆ CBBC (TS) ◆ Cbeebies (TS) ◆ E4 ◆ News Channels ◆ Living TV ◆ Film 4 ◆ Discovery ◆ More 4 ◆ UK TV History	Additional Premium channels will be available	**Access Devices** Set-top Box (STB) €150 DVR €250 Conditional Access Module (CAM) €45

Customer Information

Access Devices	Core Features and Consumer Benefits
Set Top Box	**Record** one program at the same time as recording another program. Pause, rewind and fast forward a live program whilst still recording another program. **EPG** functionality as provided on the STB **One touch recording** of all programs and the ability to schedule the automatic recording of their favourite programs at whatever frequency daily, weekly etc. Plug In - For consumers that have a third party STB/DVR or have an integrated digital TV (IDTV). simply plug the JV-digital CAM into the device to view any JV-digital pay channels without purchasing a JV-digital STB or DVR.

✳ **Smartcard with every six month service pack** - entitlements to watch the various channels associated with that Service Pack.
✳ **Pairing** The smartcard is only activated once it is 'paired' with a specific access device (i.e. STB, DVR, or CAM) and the authorisation automatically expires 6 months from that date. By pairing access devices and smartcards this means that an access device can only be matched with one smartcard and vice versa.
✳ **Top Ups** The customer can top up the smartcard before the expiry date to extend the period for an additional 6 or 12 months.
✳ **Smartcard Upgrade** - (a the JV-Digital website or Telesales) to a Standard or Premium pack smartcard.
✳ **NO Restrictions** - There are no restrictions in terms of usage of the access device or with the home (i.e. the access device can be used with any TV).
✳ **What if I want to view on second TV ?** However if the consumer wants to watch digital TV on two or more TVs in the home at the same time they will need to purchase an additional access device. If the consumer also wishes to view pay TV simultaneously on multiple TVs then they will need to purchase additional Standard Service packs (which will be discounted by 50% (i.e. €49 per 6 months).

Service Packs

6 Months Pre-paid Soft Tier Service Pack €49

6 Months Pre-paid Standard Tier Service Pack €99

6 Months Pre-paid Premium Tier Service Pack €???

FURTHER INFORMATION ON ORDERS, TRADE TERMS AND DISTRIBUTION, PLEASE CONTACT
Tel : XXXXXXX OR WEBSITE : www.easytv.ie

Customer Information

EasyTV will publish information leaflets as part of its ongoing Marketing Plan and this will be disseminated to the consumer during the call to action brand phase of the plan using:

- Press Inserts eg: Farmers Journal, RTÉ Guide, other National Press
- Local press inserts and advertising
- Ongoing updated coverage information through the website.
- Targeted direct mail and door to door leaflet drops will be considered as part of the strategy.
- **EasyTV** will consider a direct method of communication to License fee holders on the new digital service.

In addition, Retailers and Installers will be furnished with ongoing information packs examples of which are outlined above.

Sales Centres

The telesales channel will cater for consumers without Internet access who want the convenience of ordering from home. The **EasyTV** telesales number would be publicised in all marketing material as well as any TV, radio, press or outdoor advertising.

The fulfilment of telesales orders would be identical to that for orders taken via the Internet with payment by credit card and next day delivery to their home. The fulfillment process would be outsourced to a third party provider.

3.6.1.e. Are you prepared to support a common information dissemination strategy, involving all multiplex contractors, to provide such information through a single source? What commitment would you be willing to make in supporting any such entity? Please include details of any associated financial implications in section 3.4.

EasyTV is bidding for all three multiplexes and, if successful, with RTÉ would execute a fully coordinated strategy for disseminating of information nationally about the analogue switch-off and the move to digital. **EasyTV** has allocated a significant proportion of its marketing budget up to ASO of €7.7 million specifically for this type of activity.

3.6.2. Keeping Informed of Choices

3.6.2.a. What are your proposals for keeping consumers up-to-date with programme service offerings, including any proposals relating to the development and operation of an EPG?

EasyTV will participate with RTÉ in the development and on-going management of a common EPG covering all FTA and pay channels. This EPG will give details of all DTT channels for the next 7+ days and a grid view of what programs are showing in a particular time slot across all channels over those 7+ days. The EPG will carry descriptive information about the programmes including content rating information to inform viewers of the suitable of each programme for different age groups.
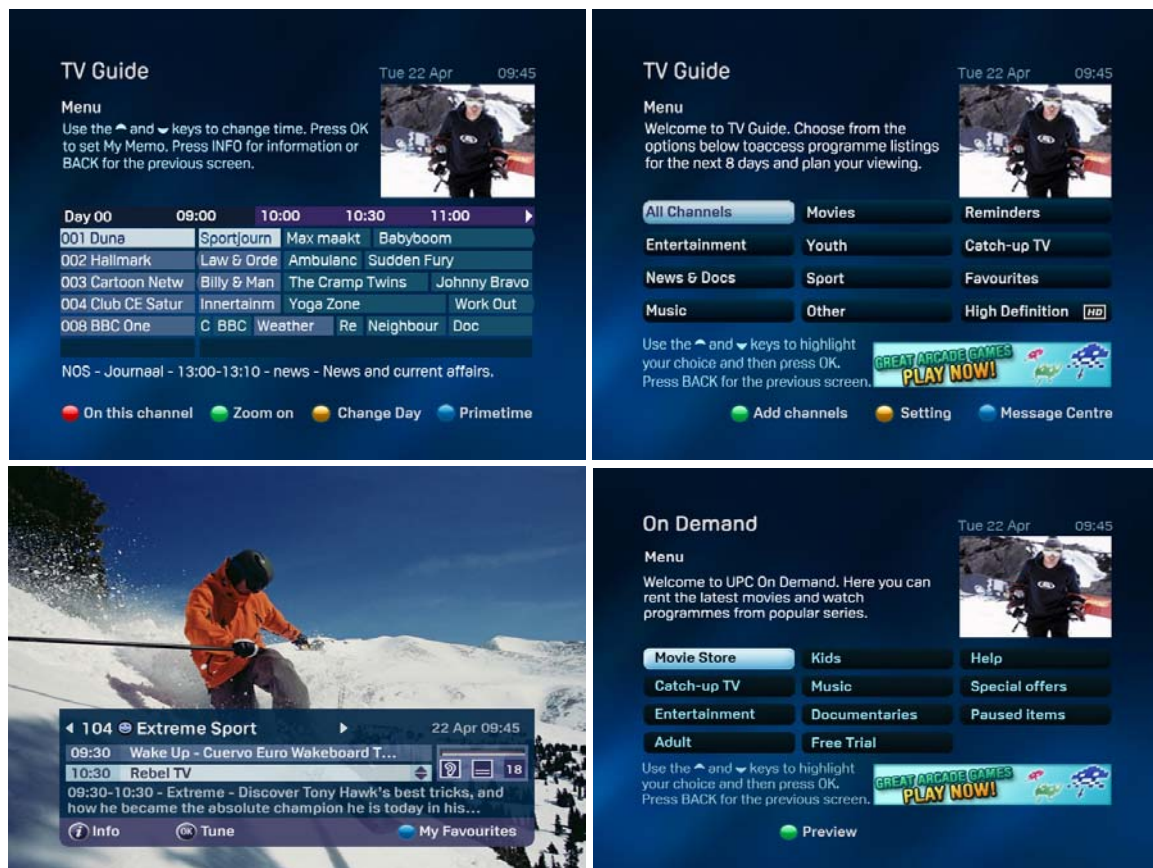
In addition to the standard EIT data, **EasyTV** intends to transmit an 'enhanced' or 'broadcast' EPG on all multiplexes. This will be an MPEG5 application which when selected will run on the receiver's MHEG5 middleware. It will have the same look and feel on all receivers. The application will be relatively lightweight and will load within seconds. The advantages of a broadcast EPG over embedded (STB-resident) include:

- Common look and feel across all receiver types

- Enhanced metadata support (including TV Anytime CRID metadata)

- Programme by genre and series linking

- Data compression (more bandwidth efficient, faster load times)

- Picture-in-picture support

- Image and graphic support

- Presentation can be easily changed (no OTA software download required)

- Support for return path connectivity

EasyTV's enhanced EPG application will have the following features:

- Key programme info: time, duration, title, synopsis, detail etc

- 7-day horizontal grid layout

- Now-next display mode

- Programme search

- Program reminders

- Record scheduler

- Series linking and Recommendations

- Picture-in-picture

In addition to the above, the broadcast EPG application will provide some additional functionality to viewers with DVR-enabled receivers. These viewers will be able to programme their DVR using a combination of broadcast EPG data and EIT data. Note carriage of EIT schedule data remains important for DVR usage, as EIT P/F (Present/Following) data is the most accurate indicator of which programme is actually on-air.

DSMCC schedule data and EIT schedule data will use Content Reference Descriptors (CRIDs) to uniquely identify programme content in the broadcast schedule. The CRID will act as the primary key linking DSMCC schedule data to EIT schedule data. One or more CRID of type Programme, Series or Recommendation may be carried in each Content Identifier Descriptor (CID) which is carried in the event loop of the Event Information Table. The CID structure and CRID types will be as described in the DTG D Book.

The provision of enhanced TV Anytime CRID metadata is of particular value to viewers with DVRs for series linking, genre linking, programme search and retrieval. The Freeview Plackback system deployed in the UK is based on use of CRID data.

In the case where a programme broadcast is subject to copyright restrictions, persistent rights management will be applied to a DVR recording of that programme through the receiver's conditional access system.

EasyTV regards IP return path technology as a significant opportunity to offer the viewer a wide range of exciting new services. In particular it will enable the viewer to avail of on-demand programme services, as well as the linear services currently available. For example as well as the traditional 'look-forward' EPG, the viewer could avail of a 'look-back' EPG which would enable them to view programmes they may have missed on an on-demand basis. These programmes will be delivered over the IP return path either as a streaming service or video download.

EasyTV will provide an EPG service with a similar look and feel to the broadcast EPG service on the Channels section of its website. It will also ensure that the DTT schedule for both FTA and all subscription channels will be carried by all the national, regional and local papers.

EasyTV understand that the UK DTG's MHEG Interactive Return Path Group will complete definition of the MHEG return path standard later this year, and anticipates that hybrid (i.e. IP return path-enabled) DTT receivers will be available in the market in thereafter. **EasyTV** view the availability of return path connectivity as a significant development that will enhance the potential of the Irish DTT Platform as a whole, not only with regard to EPG services but also with regard to the provision of other interactive services.

3.6.2.b. If you propose to develop and operate an EPG, what is your policy towards providing such a service on a common basis with other multiplex contractors and how this would be implemented in practice? What commitment would you be willing to make to the support of any such joint arrangement? (Please include details of any associated financial implications in section 3.4.)

EasyTV is bidding for all three multiplexes and, if successful, with RTÉ would develop and manage a common EPG covering all FTA and pay channels. The EPG data will be common to the platform, across all multiplexes.

In practice all the channel providers (including RTÉ) would provide a synopsis of their programs over the forthcoming weeks to a central agency (listings bureau) where the information will merged into a structured format. The compiled data will then be sent via electronic file transfer to the SI generation system in the multiplex centre, and from there inserted into the transport stream of each multiplex.
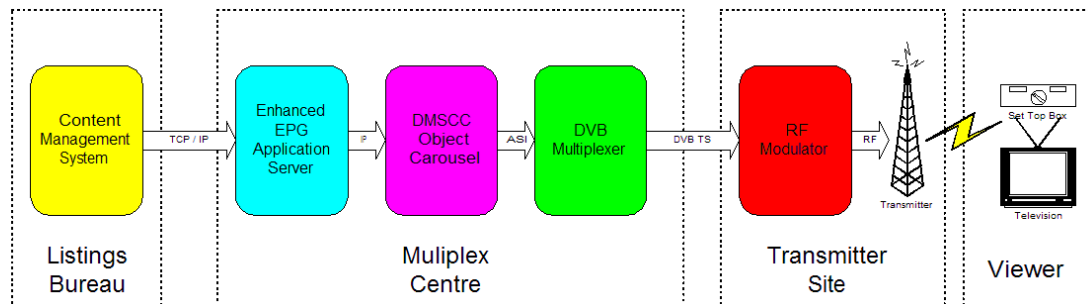
Exhibit: Enhanced (Broadcast) EPG Transmission Chain

In the case of the enhanced (broadcast EPG), the compiled data file sent by the listings bureau will be imported into the EPG application server located in the multiplex centre. From there the enhanced EPG application will be downloaded onto a DMSCC object carousel (one per multiplex), and inserted into the multiplex transport stream as a DVB data service.

Late schedule changes will be communicated by the listings bureau by way of electronic file transfer and such changes will be broadcast on all multiplexes within a short time of receipt of the updated schedule file.

Note the SI data within the multiplex transport stream will contain Logical Channel Numbering (LCN).   Receivers will assign service numbers to the received channels based on the LCN table broadcast within the SI data stream. Thus channels will be ordered in a consistent manner on all receivers.

EasyTV will liaise with the BCI to ensure channels are ordered in a consistent manner in the LCN tables and within the enhanced (broadcast) multiplex.

EasyTV's business plan includes all costs for the development and on-going management of a common EPG.

3.7. 9(2)(e)

In the event that the Commission has specified a minimum coverage area pursuant to section 8(5), the extent of the coverage area proposed to be achieved by the applicant

The Commission requires multiplex contractors to provide its minimum predicted coverage of ninety percent (90%) of the population in the State, for each multiplex, at, or immediately following, ASO (see section 2.2). Applicants are required to submit a detailed transmission plan which must include the 11 primary sites (listed in Annex 1) as well as a selection of sites (from the list set out in Annex 2), which, in the opinion of the applicant, will provide at least the minimum 90% predicted coverage, at ASO.

Applicants may choose to transmit from a different location at one or more of the transmission sites.

3.7.1.a. In relation to this criterion, applicants are required to set out their proposals for achieving, and, if appropriate, exceeding, this coverage requirement, by providing maps showing computer-predicted coverage plots, together with any supporting information necessary for the correct interpretation of the maps.

These maps should indicate predicted transmission coverage at:

(i) the launch of the service

(ii) annually thereafter or at other major rollout-phase milestones and

(iii) analogue switch off.

Response to 3.7.1.a included in response to 3.7.1.b

3.7.1.b. A table should be provided that sets out the predicted population coverage (as a percentage of the total population in the State) at:

(i) the launch of the service

(ii) annually thereafter or at other major rollout-phase milestones and

(iii) analogue switch off.

	2009				2010				2011				2012				2013
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1

TARGET COVERAGE NATIONAL POPULATION — 78% — 85% — 85% — 88% — 90% — 91% — Q1 2011 91% COVERAGE OF NATIONAL POPULATION — 93%

TRANSMISSION ROLLOUT PLAN — 11 main + 2 infill sites — 11 main + 15 infill sites — 11 main + 17 infill sites — 11 main + 22 infill sites — 11 main + 30 infill sites — 11 main + 34 infill sites — 11 main + 42 infill sites
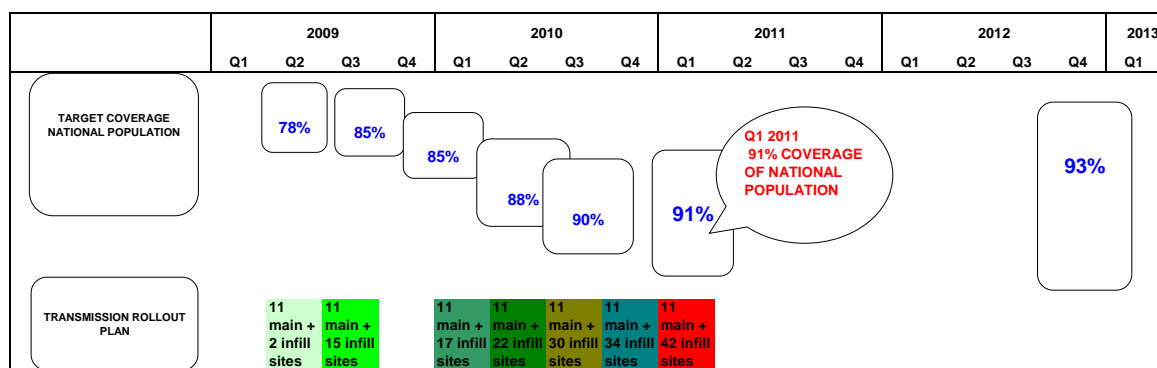
EasyTV's proposed rollout and predicted transmission coverage are as follows, please refer to Appendix 5 for a full listing of the rollout sites and their completion date:

- End Q2 2009 - A substantial percentage of the general population covered 13 sites (population covered c. 78%)

- End Q3 2009 - Next 15 sites complete (population covered c. 85%)

- End Q1 2010 - Next 5 sites complete (population covered c. 85%)

- End Q2 2010 - Next 8 sites complete (population covered c. 88%)

- End Q3 2010 - Next 7 sites complete (population covered c. 90%)

- End Q1 2011 - Next 5 sites complete (population covered c. 91%)

- End Q4 2012 - Irish ASO (population covered c. 92%)

- End Q1 2013 - UK/NI ASO (population covered c. 93%)

As Ireland is building its DTT platform at the same time as most of the rest of Europe, manufacturing capacity is finite and under great pressure and timescales are to a large extent determined by equipment availability, particularly for antennas. That said, it is RTÉNL's intention to have the 11 mandatory sites plus Greystones and Dungarvan available by the end of Q2 2009. To achieve this, where the DTT antenna has not yet been installed, the DTT signal will be combined into the existing analogue antenna, or temporary DTT antenna in order to make the site available to come on air. Early effort will be concentrated on installing the new DTT antennas at the high power sites in a coordinated manner and as quickly as possible to minimise the disruption to existing and new services. The infill sites will be installed as required for the successful BCI licence applicant after consultation and agreement with RTÉ in relation to a coordinated national rollout of all four DTT multiplexes.

The upgraded distribution system will be available in 2008 and the multiplexing centre is not a critical path item.

Appendix 5 shows the planned timeframe for the rollout and the coverage that can be achieved at each requested stage in the rollout.

The computer-predicted coverage plots, superimposed on a suitable map, must be provided in the application in an A4 or A3 format and as a high resolution image file on an accompanying CD. These plots should be for noise-limited coverage. The relevant parameters that must be applied when predicting coverage are specified in Annex 3.

*3.7.1.c. Please **confirm** that the predicted coverage will meet the 90% minimum predicted population coverage requirement at completion of ASO. (Indicate the data and method used to predict population coverage and provide details of any additional transmitter stations, frequency changes or ERP increases that will be required at ASO to achieve the 90% threshold.)*

The coverage maps are built by dividing the terrain into squares of 50m x 50m (pixels) and calculating the received signal strength within each square. The factors that have to be taken into account in this calculation are;

- The location, height, power and antenna pattern of the transmitting antenna (i.e. how much power is fired in which direction)

- The distance between the transmitting antenna and the receiving point

- Any obstacles between the two (hills, buildings, etc)

- The nature of the terrain at the receiving point (whether it is rural or densely built up urban environment)

If the received signal strength exceeds a threshold (61dBμV/m) the square is deemed served. Even within a square the signal strength will not be uniform, the more built up the area the greater the variation. If greater than 95% of a square is above the threshold then the square is deemed covered.

The limits to coverage are when the signal reduces to below the threshold simply because of distance from the transmitter or when it is screened by terrain. Coverage limited in this way is described as noise-limited.

In some cases the limit will be due to interference from another distant transmitter on the same channel; in this case the coverage is described as interference limited.

From the coverage prediction, it is possible to calculate the number of people served by that transmitter.

The system employed for population analysis has been enhanced for DTT coverage engineering to improve accuracy. The enhanced datafile has c. 1,700,000 data points (house locations) and the Central Statistics Office 2006 census population data is spread across the 1,700,000 house locations to give an average number of people per house (RTÉNL understands that the population datafile currently used by ComReg and BCI is similar to the datafile that RTÉNL used until recently and used c. 5000 data points to spread the population).

By totalling the data-points and average number of people at those data-points that lie within a predicted coverage area, the total population covered by a transmitter can be calculated. This calculation can be done for each of the transmitters but it is not valid to

then add the population coverage of each as there will be some overlap between transmitters (which would lead to a double count). Where there is an overlap, the overlapping area has to be allocated to one or other transmitter (best server or the site providing the best signal to that location). This will ensure that the total coverage is correct but will give rise to the counter intuitive effect of the coverage of one transmitter reducing when an extra one is added in order to increase the total. This will be particularly apparent as infill stations are added thus increasing the overall coverage but apparently reducing the coverage of the main stations.

The transmitting antenna pattern is a very important factor in determining coverage. The starting point for this is a template which is internationally coordinated and sets the maximum power that can be transmitted in any direction. From the template a theoretical antenna design is developed and the coverage predicted from this. There is a degree of iteration, optimising the antenna pattern for best population coverage. The next steps are the component design and manufacturer, the build, the works-tests, and then the installation. There will inevitably be small changes in pattern from the theoretical to the installed and the installed pattern is verified by aerial and ground measurements. The predictions currently available are derived from the optimised patterns. There will be some deviation from design to final installation however the overall change in total percentage population covered will be negligible.

The other two important factors are the accuracy of the terrain model and the degree to which the terrain is built up (clutter). The terrain model has a vertical resolution of 50m. The model does not have detailed data on each building but classifies the terrain as being rural, urban or dense urban and applies a correction factor for each.

Although the techniques have been developed and improved over many years, it must be accepted that coverage prediction is just that and cannot guarantee absolute accuracy especially at the edge of the coverage area, in rough terrain and in heavily built up areas.

RTÉNL has used 61dBμV/m for all predictions. This is the highest signal level listed in Annex 3 of the BCI document and therefore the overall predictions are a slightly conservative. RTÉNL has also used Q1 2013 best server population figures for the infill sites (with all 53 sites in service) at all stages in the rollout stage calculations. Again this produces slightly conservative figures for the earlier stages.

3.8. 9(2)(f)

The technical proposal, including a timetable for implementation, regarding the establishment, maintenance and operation of the multiplex

Applicants are required to set out their technical proposals in three sections dealing with transmission, distribution and multiplexing respectively.

Transmission proposals

In this section, applicants should elaborate on the transmission plans provided in response to the previous section, with reference to the following questions.

3.8.1.a. What is your proposed strategy in relation to transmission coverage? How will coverage be rolled out over the duration of the contract? (Please include details of the proposed timing, set out the critical assumptions underpinning the proposals and identify sites where commissioning of the site is envisaged after ASO.)

The build phases and coverage have already been laid out in section '3.1 Build Phases & Predicted Coverage (3.7.1a, b)' above and in Appendix 5.

The strategy is based on making a reliable service available to viewers at the earliest possible juncture in a coordinated national rollout.

RTÉNL has taken the information provided by the **EasyTV** in Appendix 1 and predicts coverage as follows:

End Q2 2009 - A substantial percentage of the general population covered 13 sites (population covered c. 78%)

- End Q3 2009 - Next 15 sites complete (population covered c. 85%)
- End Q1 2010 - Next 5 sites complete (population covered c. 85%)
- End Q2 2010 - Next 8 sites complete (population covered c. 88%)
- End Q3 2010 - Next 7 sites complete (population covered c. 90%)
- End Q1 2011 - Next 5 sites complete (population covered c. 91%)
- End Q4 2012 - Irish ASO (population covered c. 92%)
- End Q1 2013 - UK/NI ASO (population covered c. 93%)

3.8.1.b. Provide details of the transmission sites proposed by the applicant and the associated technical characteristics. These must be provided in the format set out in the following table:-

Refer to Appendix 2 attached for:

- Site Data Table

3.8.1.c. The antenna radiation pattern proposed in respect of each multiplex transmitted at a site should be provided. In cases where both HP and VP are used at the site, a pattern for each polarisation should also be provided. Confirmation is required from the site/mast owner/operator that this radiation pattern can be accommodated in the manner proposed.

Refer to Appendix 2 attached for:

- Antenna radiation patterns, HRP, VRP
- Site coverage map - noise limited
- Site coverage map - best server

3.8.1.d. What are the details of the modulation scheme, FEC code rate and guard interval proposed for each multiplex (see ComReg 07/90b, section 2.3.4 and table 19)? (Please indicate any variations envisaged in modulation scheme/s at various phases, both before and after analogue switch off.)

The modulation is 64 QAM, 2/3 FEC code rate and 1/32 guard interval.

3.8.1.e. The required transmission coverage must be achieved with a satisfactory level of technical quality and reliability. Please confirm your commitment to achieve a 99.8% service operational availability5 at the main transmission sites (analogous to those listed in Annex 1) and demonstrate how this will be achieved, including details of the proposed equipment and redundancy provisions. If such a level of availability cannot be guaranteed, please explain what level can be achieved and how, in you view, this is sufficient to ensure the technical quality and reliability of the multiplex service.

The design specification for transmitters, combiners and antennas stipulates that each system shall be capable of operating at the specified output power during its lifetime. The equipment is designed for continuous unmanned operation 365.25 days a year, 24 hours a day at rated full power.

The availability of a system is determined by the reliability (how often it goes wrong) coupled with how long it takes to repair it. The first is a function of the system design and the quality of the equipment whilst the second is a function of maintenance response times and spares availability.

RTÉNL have chosen an optimal balance between cost to provide and how much redundancy there is in the system to meet the required availabilities and have a national maintenance organisation and spares logistics arrangements in order to minimise the time to repair.

RTÉNL employs continuous, rigorous maintenance routines that ensure the reliability of the transmission systems. The system is designed to allow routine maintenance and repair to be carried out with minimum disruption to the services and without compromising safety for staff.

Main Transmission Sites

To ensure the availability requirements are met RTÉNL has designed the DTT transmission systems to incorporate dual drive transmitters with each drive capable of automatically switching between two independent input signal sources. Furthermore there is a "hot" standby (N+1) transmitter in the event of a transmitter failure, a standby transmitter of equal output power will automatically switch into service instead of the failed (or reduced output power) transmitter.

To calculate the full system availability all aspects of the infrastructure that contribute to the transmission sites operation have to be included. In addition to the transmitters, the power system and antenna systems must be included. Using a combination of manufacturer data and empirical data gathered from real-world industry transmission experience main transmission sites equipped, as RTÉNL have designed the main transmission sites (single electrical supply with generator backup (N+G), N+1 transmitter system and split antenna) will have an availability of better than 99.97% (excluding planned outages. Failure is defined as services being greater than 3dB less than nominal ERP).

The main transmission sites offered by RTÉNL are designed to exceed our understanding of the reliability requirement set out by the BCI (99.8%).

Infill Transmission Sites

Infill sites are intended to serve small population centres and therefore the majority are not built with the same level of redundancy as the main sites. Using a combination of manufacturer data and empirical data gathered from real-world industry transmission experience the infill sites equipped, as RTÉNL have designed the least robust infill transmission site (a single electrical supply, single transmitter system and single antenna) will have an availability of better than 99.89% (excluding planned outages. Failure is defined as services being greater than 3dB less than nominal ERP).

Some of the RTÉNL infill sites have backup generation fitted and some have split antenna and therefore are designed to exceed 99.89%. All the infill sites offered by RTÉNL are designed to exceed our understanding of the reliability requirement set out by the BCI (99.8%) for the main transmission sites.

3.8.1.f. How do you propose to ensure that timing and synchronisation are maintained in Single Frequency Networks (SFN)? What is the proposed approach, and rationale for any such approach, for dealing with a situation in which synchronisation of one or more transmitters in an SFN is lost?

It is intended to operate Kippure and Three Rock as an SFN.

The distribution network is locked to a GPS clock sourced from two geographically separate locations. Additionally at SFN stations the SFN adapter is also GPS locked. These facilities are duplicated thus protecting against loss of synchronisation unless there is a problem with the GPS transmission. In such circumstances the adapter will free run and may drift out of synchronisation over time with the other station(s) in the network. The effect on the ground will be that the areas of constructive and destructive interaction will move. In the extreme it may be necessary to reduce the output power or shut down one of the transmitters until the GPS signal is restored.

Distribution Proposals

3.8.1.g. What is your proposed strategy for distributing the combined content from the multiplex facility to the proposed transmission sites?

Distribution

The main body of the distribution network consists of two STM-1 microwave radio circuits in a figure of 8 configuration with three STM-1 spurs (integrated N+1 & hot standby). The

connection between the multiplexing centre and the microwave radio system will be based on a dual resilient fibre routing from the multiplexing centre to the Link Houses. A geographically separate, physically resilient and uncontended point-to-point Gigabit Ethernet over fibre connection. The DVB ASI transport stream output from each of the multiplexes is transported to the main transmission sites via this network.
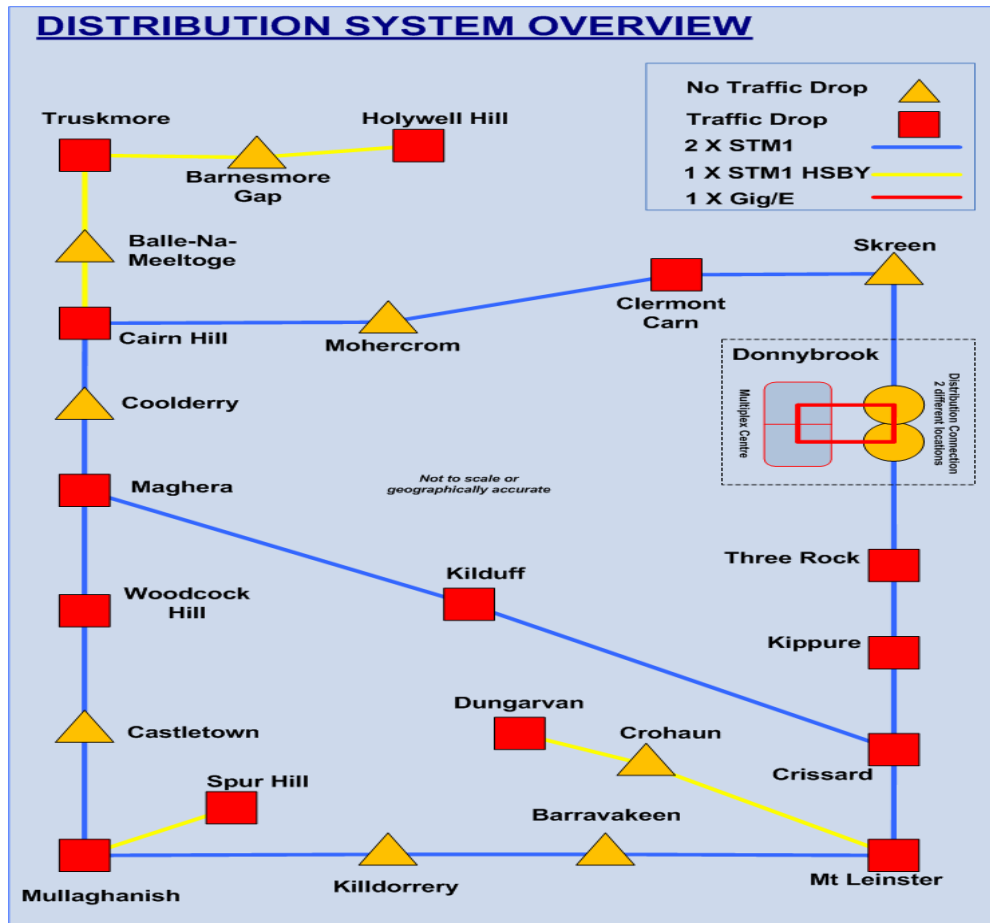
Distribution to the infill transmission sites is by reception of off air signals from a main transmission sites and retransmitting these signals on a new channel.

The information above, in tabular form is shown in Appendix 3

3.8.1.h. Please describe the specific means (e.g. terrestrial radio link, fibre/copper wire, or satellite/dual feed satellite) which you propose to use for carriage of multiplexes from the head end to the transmission sites.

See 3.8.1g above.

3.8.1.i. The information should be provided in a table, on a site-by-site basis, in the format below or in an equivalent graphical representation.

See 3.8.1g above.

3.8.1.j. Please confirm that antenna and equipment locations are available at the sites proposed to support your proposal.

The microwave primary distribution system is in place and is currently being upgraded for use as described above for DTT (complete in September 2008). With the exception of Kilduff, all locations, structures and ancillary infrastructure in the distribution system are in place. The structure at Kilduff may require replacing/upgrading but this is not a critical path issue.

3.8.1.k. Please confirm your commitment to achieve 99.99% service operational availability (equivalent to a total outage of 52 minutes per year per path) for the distribution system, and demonstrate how this will be achieved, including details of proposed equipment and system redundancy. If such a level of availability cannot be guaranteed, please explain what level of availability the system is designed to achieve and how, in your view, this will ensure a sufficiently high level of technical quality and reliability for the multiplex service.

The design specification for microwave radio equipment and fibre optic cable equipment stipulates that each system shall be capable of operating at the specified output parameters during its lifetime. The equipment is designed for continuous unmanned operation 365.25 days a year, 24 hours a day at rated full power.

The availability of a system is determined by the reliability (how often it goes wrong) coupled with how long it takes to repair it. The first is a function of the system design and the quality of the equipment whilst the second is a function of maintenance response times and spares availability.

RTÉNL have chosen an optimal balance between cost to provide and how much redundancy there is in the system to meet the required availabilities and have a national maintenance organisation and spares logistics arrangements in order to minimise the time to repair.

RTÉNL employs continuous, rigorous maintenance routines that ensure the reliability of the distribution systems. The equipment is designed to allow routine maintenance and repair to be carried out without disruption to the service and without compromising safety for staff.

To calculate the availability all aspects of the infrastructure that contribute to the distribution systems operation have to be included. In addition to the radio and distribution multiplexing equipment, the power system, radio RF system and route diversity must be included. Using a combination of manufacturer data and empirical data gathered from real-world industry distribution experience, the distribution system as designed by RTÉNL (all main components of multiplexers and radio links N+1, single electrical supply with generator and Uninterrupted Power Supply (UPS) backup (N+G+U), route diversity, hot standby, etc.) has a designed availability of better than 99.995% measured from the multiplexing centre to the furthest point (excluding planned outages).

This meets our understanding of the requirement set out by the BCI (99.99%).

Multiplexing Proposals

3.8.1.l. What is your proposed strategy in relation to the multiplexing of content? (Please indicate whether the facility will be provided on a stand-alone basis or at a shared multiplex

centre and provide details of the proposed location of the multiplexing facility and rationale for same.)

The overriding strategy is to provide a national multiplex centre in Ireland, where all DTT multiplexes can be facilitated and operated in a coordinated, efficient and effective manner. The multiplexing service will be delivered from a new multiplex facility that will be equivalent in specification to a Tier 3 datacentre facility and feature;

- Redundant power supplies, backup generation and Uninterrupted Power Supply (UPS) (N+1+G+U)
- Multiple feeds
  a) Diverse fibre optic feeds from multiple providers
  b) Microwave radio links
  c) Satellite uplink & downlink facilities
  d) Private data links (Ethernet, TCIP/IP, ISDN etc).
- EPG interactive services etc.
- Climate control
- Security
- Fire detection & suppression

In addition to a number of existing national and international audio and video connections this location currently hosts all national television and radio channels, a number of quasi-national, regional and local radio channels and some non-national television and radio services.

The features of the multiplexing service will include;

- Encoding of the television and radio services presented to the multiplexing centre. TV services can be either standard aspect ratio (4:3) or widescreen (16:9) and can be included associated services such as assistive services, subtitling, digital text, interactive services and alternative language selection. Radio services may include a graphic, MHEG-5 overlay detailing station or programme information.

- Service can be timed shared, enabling a single services slot/data stream within a multiplex to be used by different services at different times of the day.

- Assistive services including subtitling and audio description, as required (teletext, open overlay, DVB bitmaps and closed caption).

- Collation of Event Information Tables (EIT) within the Service Information (SI) element of each multiplex output (seen as Electronic Programme Guide (EPG) at the home). The SI will be cross carried on all multiplexes to ensure all that information on all broadcast services will be available to all viewers at all times. Current day plus seven days in advance.

- Support for all common over-air iTV formats, MHEG, MHP, Open TV, ETV, and ACAP.

- Continuous transport integrity monitoring including monitoring of the services presented to the multiplex centre and the output from the multiplex centre.

- Support for Conditional Access (CA) / service encryption to enable subscription and Pay TV services. Facilitating Entitlement Management Message (EMM) data and Entitlement Control Message (ECM) data, (scope to be agreed).

- Resilient network components with a fault tolerant multiplexing technology platform delivering high availability of each multiplex.

- Continuous system performance monitoring, logging and reporting.
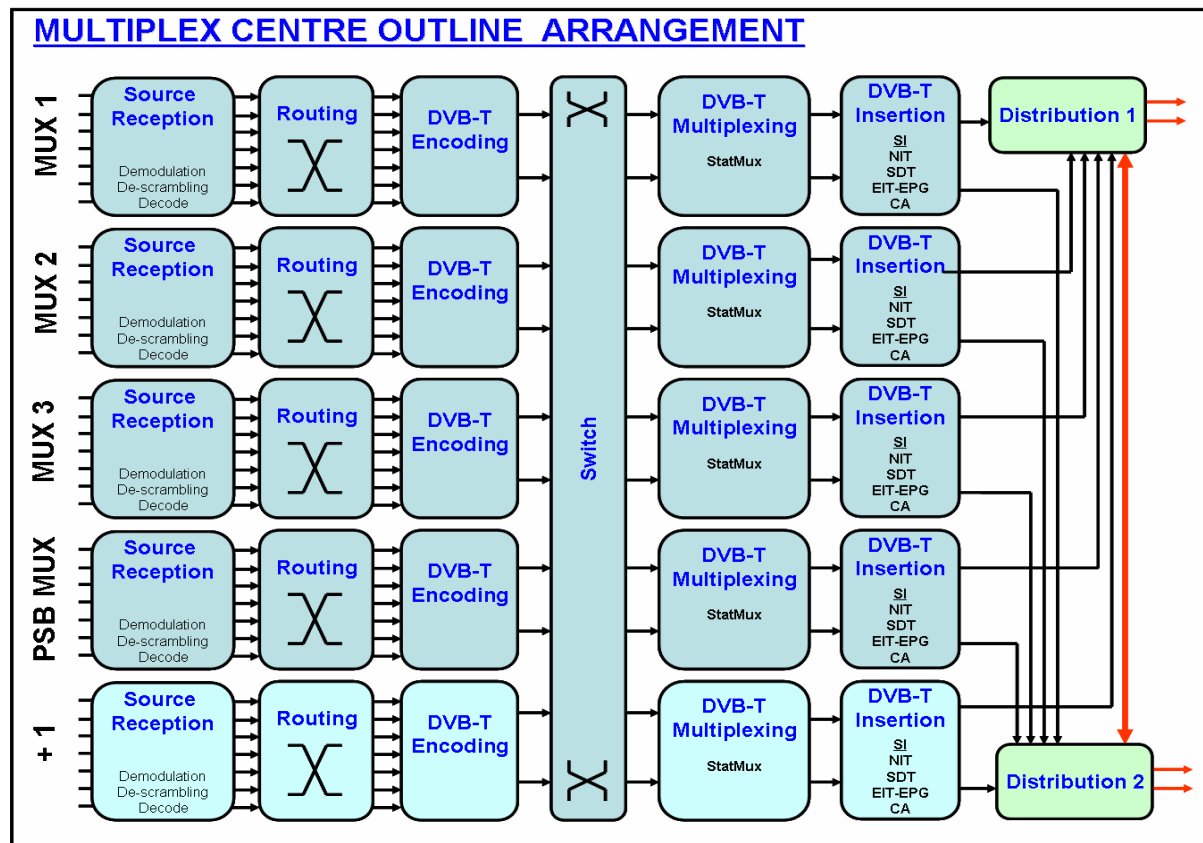
NOTE: RTÉNL are offering an integrated Multiplexing, Distribution and Transmission service only, as described above. As an aside, RTÉNL will seek multiplexing services (to be carried out in Ireland) from 3rd party providers, to be provided directly to RTÉNL in Ireland for both the public service multiplex and BCI multiplexes. RTÉNL are aware that there are many purpose built facilities for hosting and monitoring this type of multiplexing / telecommunication equipment in Ireland and in order to ensure that the most efficient solution possible is achieved a competitive tender process will be undertaken. Should this tender process arrive at a technically equal or better solution that is more cost efficient than what RTÉNL has proposed, RTÉNL have reserved the right to use such facility.

3.8.1.m. What, in percentage terms, do you expect the use of capacity on the multiplex to be for (i) programme and programme-related content and (ii) non-programme related data? How do you intend to ensure that the programme and programme-related data will always exceed the eighty percent (80%) minimum requirement (see section 2.2.3)?

All 3 multiplexes will be broadcast using 64QAM 2/3 mode modulation which will provide a net bit rate of 24 Mbps per multiplex.

The JV envisages that a maximum of 2 Mbps per multiplex will be allocated for Transport Stream (TS) data (SI, PSI etc), EIT, broadcast EPG, data and audio services, leaving a minimum 22 Mbps for television programme services. Thus:

(i) A minimum of 22 Mbps (91.7%) of multiplex capacity will be used for television programme and programme-related content

(ii) A maximum of 2 Mbps (8.3%) of multiplex capacity will be used for non-programme related data

Within the multiplex configuration, a minimum bit-rate of 22 Mbps will be allocated for the statistical multiplexing of television programme-related content streams. Fixed bit-rate allocation allocations totalling no more than 2 Mbps will be made for TS data, EIT data, broadcast EPG data, data services and audio services.

3.8.1.n. What, in percentage terms, do you expect the use of capacity on the multiplex to be for the following purposes?

All 3 multiplexes will be broadcast using 64QAM 2/3 mode modulation which will provide a net bit rate of 24 Mbps per multiplex.

The JV envisages that a maximum of 2 Mbps per multiplex will be allocated for Transport Stream (TS) data (SI, PSI etc), EIT, broadcast EPG, data and audio services, leaving a minimum 22 Mbps for television programme services. Thus:

(i) A minimum of 22 Mbps (91.7%) of multiplex capacity will be used for television programme and programme-related content

(ii) A maximum of 2 Mbps (8.3%) of multiplex capacity will be used for non-programme related data

Within the multiplex configuration, a minimum bit-rate of 22 Mbps will be allocated for the statistical multiplexing of television programme-related content streams. Fixed bit-rate allocation allocations totalling no more than 2Mbps will be made for TS data, EIT data, broadcast EPG data, data services and audio services.

(i) television content (SD and HD content);
Television content : 22 Mbps (91.7%)
(ii) digital teletext;
Digital Teletext: Carried on PSB MUX.
(iii) other interactive services; EPG;
Data Services, Enhanced (Broadcast) EPG: 500 Kbps (2.08%)
 (iv) SI;
SI (incl EIT): 500 Kbps (2.08%)
(v) radio content;
Radio Content: 500 Kbps (2.08%)

NB: On one of the multiplexes, 500 Kbps (2.08%) will be allocated to an Engineering Channels for provision of OTA (over-the-air) software downloads to receivers. There will be no bandwidth allocation for Radio services on this multiplex.

(vi) Assistive services and other services that will require more than 0.5% of the available multiplex capacity.

Assisted services: 500kps (2.08%)

3.8.1.o. Please indicate your proposed approach to ensuring a sufficiently high level of technical quality for the multiplex service, including necessary video and audio bit-rates for programme content. Supporting information should be provided where possible using the format below:

For video services, the utilisation of MPEG4 technology is proposed so that higher quality pictures can be obtained from lower bitrates than MPEG2 technology. This technology is still developing and significant developments over the next few years will enable the quality of services to be maintained whilst reducing the bitrate to enable additional services.

To make best use of the available bitrate within each multiplex, video services will be multiplexed within a statistical multiplexing pool, with minimum, maximum and nominal bitrates defined.

Easy TV envisage that on average 21 Mbps statistical multiplexing pool will be set aside for carriage of 8 television video services per multiplex (with an additional 1Mbps set aside for the associated audio channels). It is intended that the following statistical multiplexing parameters will apply:

- Average bit-rate per channel: 2.67 Mbps

- Maximum bit-rate per channel: 5.5 Mbps

- Minimum bit-rate per channel: 1.75 Mbps

Statistical multiplexing operates on the principal that the constituent services are delivered at variable bit-rates. The actual encoding bit-rate required for a particular channel at any point in time depends on the nature of the content being broadcast. In general high detail, rapidly changing requires a higher band-width than lower detail, more static content. To optimise the performance of each statistical multiplex, and to ensure high technical quality, each multiplex will contain a mix of different channel types. This will reduce bandwidth contention within the statistical multiplex. Therefore channels likely to require more bandwidth (e.g. sports channels) will not with located within the same stat-mux, but will be located across different multiplexes.   Note from a technical perspective, channels can be located on different multiplexes regardless of the package tier they are contained in.

The audio services associated with each television channels will be contained within a fixed bandwidth allocation of 1 Mbps. Audio services will be broadcast at 128 Kbps (HE.AAC encoding) or 192Kbps (MPEG2L1 encoding).

Stereo Radio services will be encoded at 128 Kbps (HE.AAC encoding) or 192 Kbps (MPEG2L1 encoding).
Prior to final implementation an analysis of the decoded pictures will be performed to optimise the configuration of each multiplex to suit the services being carried.

To optimise coordination and consistency, SI Information will be cross-carried across all multiplexes. Cross carriage of information will include service information and schedule data available on other multiplexes.

The SI will be collated and generated centrally, within the multiplex centre, with one source of SI for the entire DTT network. This ensures the integrity and consistency of SI information across the entire platform. The system for the generation of central SI is similar to the Eventis Casis system deployed during the DCENR's DTT pilot. This system generates SI information for each multiplex within the multiplexing centre. It will be configured to automatically generate the cross-carried SI.

In addition to generating the SI, the system will be used to provide EIT for the entire multiplexing service. EIT is used to convey information about current and following programmes ("Now and Next" information carried as EITp/f) and also to convey a 7 day schedule (that can be used to populate an EPG – this is carried as EITschedule). The system will support cross carriage of EITp/f and also EITschedule.

All the channel providers (including RTÉ) would provide a synopsis of their programs over the forthcoming weeks to a central agency (listings bureau) where the information will merged into a structured format. The compiled data will then be sent via secure electronic file transfer to the SI generation system in the multiplex centre, incorporated into Event Information Table (EIT), and from there inserted into the transport stream of each multiplex.

In the case of the enhanced (broadcast EPG), the compiled data file sent by the listings bureau will be imported into the EPG application server located in the multiplex centre. From there the enhanced EPG application will be downloaded onto a DMSCC object carousel (one per multiplex), and inserted into the multiplex transport stream as a DVB data service.

Late schedule changes will be communicated by the listings bureau by way of secure electronic file transfer and such changes will be broadcast on all multiplexes within a short time of receipt of the updated schedule file.

Note the SI data within the multiplex transport stream will contain Logical Channel Numbering (LCN). Receivers will assign service numbers to the received channels based on the LCN table broadcast within the SI data stream. Thus channels will be ordered in a consistent manner on all receivers.

EasyTV will liaise with the BCI to ensure channels are ordered in a consistent manner in the LCN tables and within the enhanced (broadcast) EPG.

EasyTV's business plan includes all costs for the development and on-going management of a common EPG.
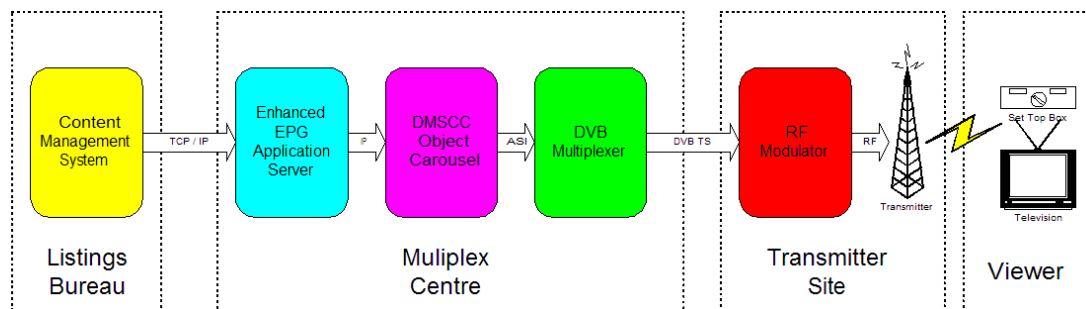
Exhibit: Enhanced (Broadcast) EPG Transmission Chain

3.8.1.q. Please provide details of the middleware proposed to support the proposed EPG service, if any, and confirm whether, and if so how, over-the-air software updates will be provided.

EPG Middleware: **EasyTV**'s proposed Enhanced (Broadcast) EPG will be a lightweight MHEG5 application (300 KB) that will execute on the MHEG5 middleware stack contained within the receiver.

The EPG application and associated schedule data will be broadcast on each multiplex from a DSMCC object carousel. In addition EIT schedule data will be broadcast within the SI of each multiplex. Carriage of EIT schedule data remains important for PVR usage, as EIT P/F (Present/Following) data is the most accurate indicator of which programme is actually on-air.

DSMCC schedule data and EIT schedule data will use Content Reference Descriptors (CRIDs) to uniquely identify programme content in the broadcast schedule. The CRID will act as the primary key linking DSMCC schedule data to EIT schedule data. One or more CRID of type Programme, Series or Recommendation may be carried in each Content Identifier Descriptor (CID) which are carried in the event loop of the Event Information Table.

The CID structure and CRID types will be as described in the DTG D Book.

An engineering channel (bandwidth 500 Kbps) will be configured on one of the multiplexes to facilitate OTA download of software updates to receivers. A range of boot loader protocols will be supported, including DVB-SSU.

3.8.1.r. Do you propose to carry access services (audio description (AD), subtitling, signing)? If so, please indicate how these services will be originated and sourced and detail the mechanism for provision including (i) whether the AD service will be provided by a separate audio stream for user mixing with programme sound, or whether a composite audio stream containing both audio description and programme sound will be premixed and provided as an additional audio service and (ii) the typical bit rate proposed for such services. Supporting information should be provided using the format below.

Programme Sevice Name	Audio Descriptor (pre-mixed or user mixable)	Subtitling / signing (sub only, sign only , sub + sign)	Rebroadcast link/Direct/Satellite	Reason why
BBC One	Pre mixed	Sub + sign (if available)	Terrestrial rebroadcast	Contract may require that the terrestrial re-broadcast be used. This allows the data allocated for DTT to be used
BBC Two	Pre mixed	Sub + sign (if available)	Terrestrial rebroadcast	
BBC Three	Pre mixed	Sub + sign (if available)	Terrestrial rebroadcast	
BBC Four	Pre mixed	Sub + sign (if available)	Terrestrial rebroadcast	
CBBC (TS)	Pre mixed	Sub + sign (if available)	Terrestrial rebroadcast	
Cbeebies (TS)	Pre mixed	Sub + sign (if available)	Terrestrial rebroadcast	
Channel 4	Pre mixed	Sub + sign (if available)	Terrestrial rebroadcast	
TV3 Extra	Pre mixed	Sub + sign (if available)	Direct	Most expedient at this time
Channel 6	Pre mixed	Sub + sign (if available)	Satellite + Link	Most expedient at this time
City Channel	Pre mixed	Sub + sign (if available)	Direct	Most expedient at this time
Extreme Sports	Pre mixed	Sub + sign (if available)	Satellite + Link	Most expedient at this time
E4	Pre mixed	Sub + sign (if available)	Satellite + Link	Most expedient at this time
MTV	Pre mixed	Sub + sign (if available)	Satellite + Link	Most expedient at this time
Living TV	Pre mixed	Sub + sign (if available)	Satellite + Link	Most expedient at this time
Film4	Pre mixed	Sub + sign (if available)	Satellite + Link	Most expedient at this time
Discovery	Pre mixed	Sub + sign (if available)	Satellite + Link	Most expedient at this time
More4	Pre mixed	Sub + sign (if available)	Satellite + Link	Most expedient at this time
Sky One	Pre mixed	Sub + sign (if available)	Satellite + Link	Most expedient at this time
Sky News	Pre mixed	Sub + sign (if available)	Satellite + Link	Most expedient at this time
Sky Sports News	Pre mixed	Sub + sign (if available)	Satellite + Link	Most expedient at this time
UKTV History	Pre mixed	Sub + sign (if available)	Satellite + Link	Most expedient at this time
Setanta	Pre mixed	Sub + sign (if available)	Satellite + Link	Most expedient at this time
Sky	Pre mixed	Sub + sign (if available)	Satellite + Link	Most expedient at this time
TV3 Entertainment	Pre mixed	Sub + sign (if available)	Direct	Most expedient at this time
Polish Channel	Pre mixed	Sub + sign (if available)	Satellite + Link	Most expedient at this time
Virgin1	Pre mixed	Sub + sign (if available)	Satellite + Link	Most expedient at this time
Dave	Pre mixed	Sub + sign (if available)	Satellite + Link	Most expedient at this time
UKTV Gold	Pre mixed	Sub + sign (if available)	Satellite + Link	Most expedient at this time

Please note that the above programming services are illustrative but not necessarily indicative of the final channel line-up.

EasyTV will specify that the Digital STBs be enabled for pre mixed AD channel as well as the ability to mix an AD track with the standard audio track. It will then be able to present AD in what ever method is used by the channel provider. **EasyTV** have no plans to generate an AD track where not provided by the channel provider.

EasyTV will relay any subtitles provided by the channel provider and will also provide some channels with signing if provided by channel provider.

Subtitling

Subtitling is the term used to describe visual presentation of the audio track and will be supported by the multiplexing service. Typically this includes all spoken dialogue, but can also include descriptive text i.e. "Loud explosion". This requires support at both the multiplex centre and also within the STB. In addition the content provider must provide subtitle information. To minimise complexity subtitles will be supplied as Teletext subtitles and be present on the incoming video stream. The multiplex centre will include an N+1 redundant subtitle system to perform Teletext to DVB subtitle transcoding. This service feature involves a mixture of infrastructure and per channel costs and will produce DVB subtitle bitmaps according to EN300 743 v1.2.1 (2002-10) for every video service and will include the ability to provide a time delay to the subtitles to match the video encoding delay. The redundancy of the subtitle encoder system will be fully automatic and will provide sufficient monitoring and alarm reporting to allow for full fault detection, logging and fault analysis.

Audio Description (AD) encoding.

The multiplexing service will provide an N+1 redundant audio description encoding system to produce AD audio. AD source data will be carried within the incoming feeds. It will include the ability to provide a physical time delay to the AD to match the video encoding delay.

When AD data is not present in the incoming feed or the AD control track is missing, the AD encoders will operate in bitrate saving mode (so that the output bitrate of the AD encoder is zero). The redundancy of the AD encoders will be fully automatic and will provide sufficient monitoring and alarm reporting to allow for full fault detection, logging and fault analysis.

EasyTV will liaise with equipment manufacturers to ensure a supply of Audio Description enbled equipment is available for the Irish market.

3.8.1.s. How will the programme services, to be carried on the multiplex, be sourced, e.g. terrestrial rebroadcast link, satellite, direct input (including fibre or terrestrial radio link from studio)? Please provide the rationale.

All TV channels will be sourced through a combination of terrestrial retransmission, satellite retransmission, and direct fibre-link.

Professional IRD equipment will be used in the head-end to decode DTT and DTH transmissions to baseband SDI (with embedded AES audio). These SDI signals will be routed thereafter to the Multiplex encoding and monitoring equipment.

Channels delivered by direct-fibre link to the head-end will be decoded to baseband SDI and these signals will be routed to the Multiplex encoding and monitoring equipment.

3.8.1.t. Please indicate your commitment to achieve a 99.99% service operational availability of the multiplex facility (equivalent to a total outage of 52 minutes per year) and demonstrate how this will be achieved with reference to location, equipment, and equipment redundancy. If such a level of availability cannot be guaranteed, please provide the level of availability proposed and how, in your view, this will provide a sufficiently high level of technical quality and reliability for the multiplex service.

The design specification for multiplex centre stipulates that each system shall be capable of operating at the specified parameters during its lifetime. The equipment is designed for continuous unmanned operation 365.25 days a year, 24 hours a day at rated full power.

The availability of a system is determined by the reliability (how often it goes wrong) coupled with how long it takes to repair it. The first is a function of the system design and the quality of the equipment whilst the second is a function of maintenance response times and spares availability.

RTÉNL have chosen an optimal balance between cost to provide and how much redundancy there is in the system to meet the required availabilities and have a national maintenance organisation and spares logistics arrangements in order to minimise the time to repair.

RTÉNL employs continuous, rigorous maintenance routines that will be applied in the multiplexing centre to ensure the reliability. The equipment is designed to allow routine maintenance and repair to be carried out without disruption to the service and without compromising safety for staff.

To calculate the availability all aspects of the infrastructure that contribute to the multiplex centres operation have to be included. In addition to the various encoders/decoders, data carousels, switching, routing and multiplexing equipment, the power systems, inherent redundancy and overall facility specification must be included. Using a combination of manufacturer data and empirical data gathered from real-world industry telecommunication/multiplexing experience, the multiplexing centre as designed by RTÉNL (all main components N+1, integrated Slipless switching (switching at ASI packet boundaries between non-identical points in two streams such that no loss of synchronisation is detected by the downstream equipment), dual electrical supply with generator and Uninterrupted Power Supply (UPS) backup (N+1+G+U), interconnection diversity, and overall multiplex system N+1. Redundancy within each multiplex and redundancy within the multiplexing centre.) has a designed availability of better than 99.99% (excluding planned outages).

This meets our understanding of the requirement set out by the BCI (99.99%).

3.9. 9(2)(g)

The duty imposed on the Commission under section 4(5) Section 4(5) states:

It shall be the duty of the Commission to endeavour to arrange for the broadcasting of any television broadcasting service in Northern Ireland that is notified to the Commission by the Minister, being a service that is receivable throughout the whole of Northern Ireland and is provided by terrestrial means, by digital means under a multiplex contract.

The purpose of the following questions is to ascertain how, and to what extent, an applicant might accommodate the inclusion on the multiplex of television service(s) (receivable throughout the whole of Northern Ireland and provided by terrestrial means), in the event that a notification is made by the Minister to the Commission, further to the provisions of section 4(5) of the 2007 Act.

3.9.1.a. How might one or more such services be accommodated on the multiplex? Your response should set out the capacity, if such is available, to accommodate any such service, the means proposed for channel sourcing and any issues you anticipate might arise in respect of SI, EPG or other signalling.

The **EasyTV** proposal for programme services as part of this bid already includes a commitment to carry all the TV services currently available in Northern Ireland (i.e. BBC1, BBC2, BBC3, BBC4, Channel 4) except UTV. Our understanding is that there are specific rights issues with regards to UTV broadcasting on the DTT platform which would need to be resolved before the channel could be cleared for carriage on the platform.

There is currently sufficient capacity on the FTA multiplex to accommodate UTV subject to normal commercial terms being agreed. However if UTV was to be carried on one of multiplexes awarded to **EasyTV** then it would be necessary for an existing pay channel to be substituted to make way for UTV.

The UTV channel would be sourced via the same route that is already in place for the existing UK terrestrial channels and **EasyTV** foresee no issues in terms of the SI, EPG or other signaling.

3.9.1.b. How would such a notification impact on the television programme content already carried on the multiplex and agreements entered into by you in respect of the carriage of content?

As stated in 3.9.1.a above, such an announcement should have minimal impact on the programme content already carried on the multiplex. The impact on existing contracts would be dependent upon whether the instruction specified that the channels needed to be carried FTA. **EasyTV**, as with all existing pay TV platforms in Ireland, are obliged to pay substantial royalties to carry UK terrestrial channels in Ireland and these contracts would need to renegotiated.

3.9.1.c. What impact do you anticipate such a notification may have on your business plans and financial projections?

All existing pay TV platforms in Ireland pay substantial royalties to carry UK terrestrial channels in Ireland. The impact of such a notification upon the DTT platform would depend on whether or not we were instructed to carry the UK terrestrial channels FTA. If the channels were to be carried FTA then, although there would be a cost saving in terms of royalties, the loss of these channels from our pay TV packages would severely undermine the business model to the extent that the business would potentially be no longer viable. If the notification to carry the UK terrestrial channels could be met by including them in our entry pay TV package then the impact on the business plans and financial projections would be negligible if not non-existent.

3.9.1.d. How is your ability to accommodate such a notification affected by the attachment, or not as the case may be, of any conditionality to this application?

EasyTV is bidding for all three multiplexes and therefore there is no impact in terms of conditionality in our bid. If we are awarded all three multiplexes we will be able accommodate any instruction to carry all UK terrestrial channels.

3.10. 9(2)(h)

Any other matters which the Commission considers to be necessary to secure the orderly establishment, maintenance and operation of multiplexes

In addition to the specific requirements covered under previous criteria, the BCI will assess the overall realism shown in each application, as suggested by the level of coherence between the proposals and any supporting research or other data; the degree of optimism exhibited in the financial projections and underlying assumptions; and the application of good risk management principles. The BCI will also take account of the following:

* *Timeframe for commencement of transmission;*

* *Media concentration considerations; and*

* *Achievement of statutory and BCI Policy objectives.*

Timeframe for Commencement of Transmission

Section 4(4) of the Act requires the Commission to endeavour to arrange, as a matter of priority, for the establishment, maintenance and operation of three national television multiplexes (emphasis added). The Commission considers it desirable that BCI-licensed DTT multiplex contractors commence transmission at the earliest possible date. For this reason, the BCI shall have regard to the overall timeframe proposed by applicants for implementation of their proposals, including the date proposed for commencement of transmission should the multiplex contract be awarded.

3.10.1.a. Are any consents, clearances, permissions or approvals (including EC Merger approval) necessary or appropriate, or other conditions needing to be met either before or after the contract is awarded?

Where appropriate, please provide details, including a timetable, for satisfying the requirement(s).

It is likely that the creation of the joint venture will constitute a concentration for the purposes of the EC Merger Regulation (the "ECMR"), and given the turnover generated by LGI and RTÉ in their most recent financial years, the approval of the European Commission (the Commission) will need to be sought by the parties before the joint venture commences operation.

The parties will co-operate in the preparation and submission of the notification to the European Commission with a view to having the joint venture reviewed in a timely fashion.

It is difficult to give a settled view of the likely timetable for receiving the necessary clearances since this will, to a large degree, be dependent on external factors. A phase one

review could be completed by the Commission within 25 working days from the date of notification.

In the event that the Commission wished to carry out an in depth phase two review, then the Commission could take a further 90 working days to review the transaction. In addition, in the event that the Irish Competition Authority requested the Commission to grant it jurisdiction over this transaction, and the Commission agreed to this request, then the Competition Authority would have four months from the date the Commission referred the transaction within which to complete its review.

Under the Code of Practice for Governance of State Bodies RTÉ's participation in joint ventures is subject to the legal capacity to do so and to the prior written approval of the relevant Minister, given with the consent of the Minister for Finance (6.1). The consent of the Minister will be sought.

Both parties have separately consulted with their advisors, the result of which is the conclusion from both sets of advisors that the JV can reasonably expect to obtain clearance from the relevant Competition Authority, see Appendix D.

3.10.1.b. Please submit a critical path analysis identifying all key actions and decisions required on the applicant's part and their timescale from the time of the award of the contract to the on-air date.

The parties envisage that a notification will be made to the Commission as soon as possible following the execution of a contract with the BCI, should a contract be awarded. A phase one review by the Commission could be completed within 25 working days from the date the notification is made to the Commission. In this scenario, as described in the following critical path analysis diagram, the time taken from award to an on air launch in June 2009 would be approximately 43 weeks.

This diagram can only be considered indicative of the critical path analysis in a phase one merger review process. Factors beyond the parties control could influence the length of time taken to obtain merger control approval, which will have a consequential effect on the target on-air launch date. As noted above in section 3.10.1.a, the Competition Authority could request the Commission to refer the transaction back to Ireland for its review, in which case the Commission's merger timetable will be extended under the terms of the ECMR. In addition, should either the Commission or the Competition Authority, as the case may be, decide to engage in an in-depth review of the proposed joint venture, the merger control timetable will be extended in accordance with the time-lines explained generally in 3.10.1.a above.

Scenario A - Phase 1 ECMR Only Required (at EU Level)
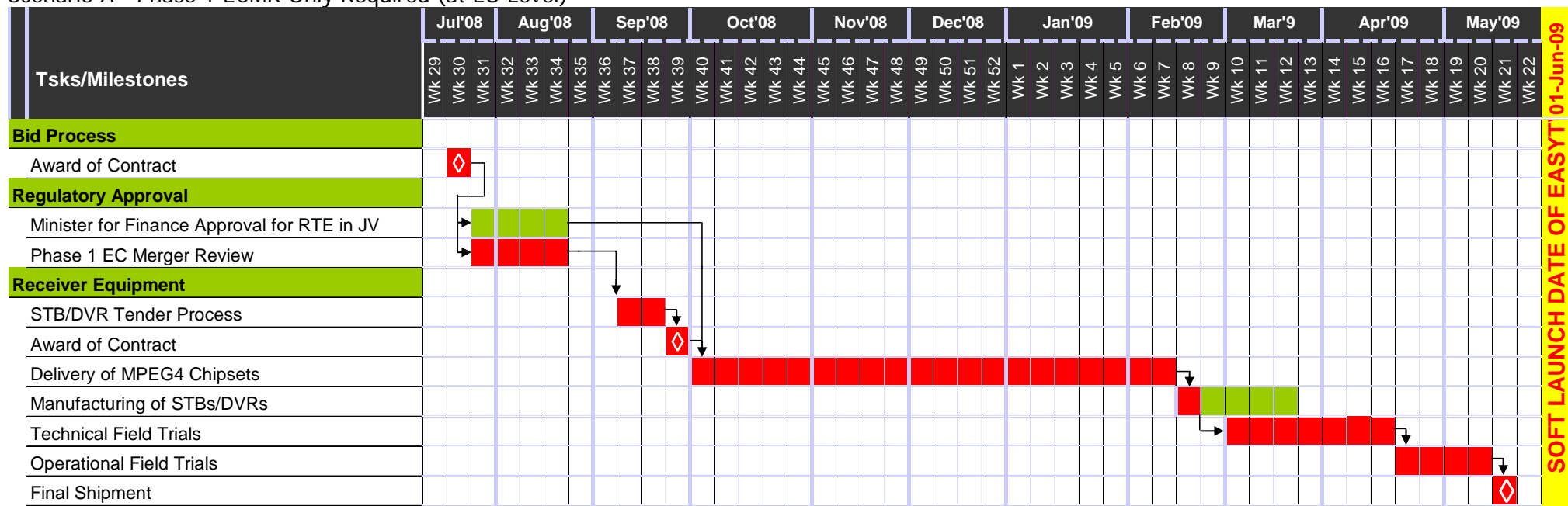
Assumptions:

1. Award of BCI Contract on 21st July 2008
2. Phase 1 EC Merger only Review lasts 5 weeks
3. Short STB tendering process of 2 weeks and contract awarded at end of ECMR Phase 2
4. 20 weeks lead time on order of MPEG4 chipsets & 5 weeks production run
5. One month of Technical Field Trials followed by one month of Operational Field Trials

3.10.1.c. How is your ability to progress to commencing transmissions affected, if at all, by the attachment, or not as the case may be, of any conditionality to this application?

1 of 3. This application is conditional on the Applicant being awarded all 3 DTT television multiplex contracts.

Media Concentration Considerations

The BCI's DTT Multiplex Licensing Policy (2008) states that the Commission shall have regard to "the desirability of allowing any person, or group of persons, to have control of, or substantial interests in, an undue amount of the communications media in the area covered by the multiplex contract (i.e. the State)."6

3.10.1.d. With reference to the information provided in section 3.3, please identify and provide details of the following:

(i) All substantial interests held (either directly or indirectly) by the applicant or by any member of the applicant or by any director of the applicant in the communications media in the State;

RTÉ Commercial Enterprises Limited provides free, web-based on-line services broadly aimed at Irish Audiences, produces and publishes the RTÉ Guide, provides the Aertel teletext service and engages in a number of media related commercial activities including, programme merchandising sales, sale of library and archive material, IVR/SMS telecoms revenue share, studio production of television and radio advertisements, hire of radio production facilities, mobile radio studio and sponsorship sale, sale of on-line banner advertising and sponsorship, sale of teletext advertising and sponsorship.

RTÉ Commercial Enterprises Limited is a wholly owned subsidiary of Radio Telefís Éireann (RTÉ). RTÉ was established as a statutory corporation under the Broadcasting Authority Act, 1960 as the Irish public service broadcaster. RTÉ operates the public service television channels RTÉ One and RTÉ Two, and the public service radio channels RTÉ Radio 1, RTÉ 2 fm, RTÉ lyric fm and RTÉ Raidío na Gaeltachta. It also operates the RTÉ National Symphony Orchestra and the RTÉ Concert Orchestra. Its principal subsidiaries are RTÉ Commercial Enterprises Limited (see above) and RTÉ Transmission Network Limited. RTÉ Transmission Network Limited operates a national broadcast transmission network within the State, which it makes available to both local and national broadcasters, including RTÉ's own services on an arms length basis. RTÉ Transmission Network Limited also rents surplus tower/mast space to a variety of third party non-broadcast users.

Irish Digital (TT) Holdings Ltd ("IDTTH") is an incorporated wholly owned subsidiary of LGI Ventures BV.

LGI Ventures BV ("LGIV"), a limited liability company incorporated under the laws of the Netherlands, with its registered address at 53 Boeing Avenue, 1119 PE Schiphol-Rijk, the Netherlands. It is an indirect wholly owned subsidiary of Liberty Global, Inc (see below), and is primarily a vehicle through which LGI owns a variety of minority joint venture investments. These include a holding of 35.5% of City Channel Limited, an Irish local television channel, with its registered address at 88/89 Furze Road, Sandyford Industrial Estate, Dublin 18 (see below).

LGI Ventures BV is an indirect wholly-owned subsidiary of Liberty Global, Inc ("LGI"). LGI is a NASDAQ quoted corporation incorporated under the laws of Delaware, United States of America.

LGI is an international cable operator offering advanced video, telephone, and broadband Internet services. LGI commenced operations in June 2005 as a result of the combination of Liberty Media International and UnitedGlobalCom. It operates state-of-the-art broadband communications networks in 17 countries principally located in Europe, Japan, Chile, and Australia. With over 20,000 employees, LGI connects 16 million customers to the world of information, communications and entertainment. Based on the company's consolidated operating statistics at December 31, 2007, LGI's networks passed approximately 30 million homes and served approximately 23.5 million service subscribers. Further information on LGI can be found at www.lgi.com

With respect to the Irish market, LGI has an indirect 100% ownership of the following:

• UPC Broadband Ireland (UPC Ireland), which comprises the businesses of NTL Communications (Ireland) Ltd. ("NTL") and Chorus Communication Ltd. ("Chorus") which combined represents the largest Pay TV operator in Ireland. It owns and operates cable and MMDS networks in over 22 of the 26 counties in Ireland. UPC Ireland operates throughout Ireland and provides a range of services including broadband, digital and analogue TV, and telephony services, including VoIP, to their residential customers. The company also provides a range of retail and wholesale voice, data and Internet products and services to the business market comprising private and public organizations as well as resellers. At the end of December 2007, UPC's analogue and digital networks passed approximately 856,000 households and had 592,300 customer relationships.

• A holding of 35.5% of City Channel Limited, an Irish local television channel, with its registered address at 35.5% of City Channel Limited, an Irish local television channel, with its registered address at 88/89 Furze Road, Sandyford Industrial Estate, Dublin 18. City Channel Limited owns and operates a local television channel in the Dublin area.

(ii) Control - exercised directly or indirectly, by the applicant or by any member of the applicant or by any director of the applicant - of any communications media in the State.

RTÉ Commercial Enterprises Limited a member of **EasyTV** controls the media activities referred to in (i) above.

Conor Hayes, a director designate of **EasyTV** is employed as Chief Financial Officer of RTÉ. Tom Quinn, a director designate of **EasyTV** is employed as Secretary to the RTÉ Authority. RTÉ operates the public service television channels RTÉ One and RTÉ Two, and the public service radio channels RTÉ Radio 1, RTÉ 2 fm, RTÉ lyric fm and RTÉ Raidío na Gaeltachta. It controls RTÉ Commercial Enterprises Limited (see (i) above) and RTÉ Transmission Network Limited. RTÉ Transmission Network Limited operates a national broadcast transmission network within the Sate, which it makes available to both local and national broadcasters, including RTÉ's own services on an arms length basis. RTÉ Transmission Network Limited also rents surplus tower/mast space to a variety of third party non-broadcast users.

Tom Quinn and Conor Hayes are directors of RTÉ Commercial Enterprises Limited and of RTÉ Transmission Network Limited. Tom Quinn is Company Secretary of RTÉ Commercial Enterprises Limited and of RTÉ Transmission Network Limited. He is a director of Telegael Teo, a media services company.

IDTTH as a wholly owned subsidiary of LGIV and a member of EasyTV controls the media activities refered to in (i) above.

IDTTH's directors are Ray Collins Director of Strategy and Corporate Development within Liberty Global, a director of Irish Digital (TT) Holdings Limited and a Director of City Channel Ltd. Chris Smith Director of LGI Ventures BV, a direct subsidiary of Liberty Global Inc.

3.10.1.e. The applicant should state why, in its view, the award of one (or more) DTT multiplex contract(s) to the applicant would not result in the applicant having control of, or substantial interests in, an undue amount of the communications media in the State.

Refer to response under 3.10.1.f.

Applicants should discuss the context in which their statement is made, with reference to the following:

(i) The totality of the communications media in the State

(ii) The share of the total audience of the various communications media in the State

The BCI shall apply two tests in order to determine if an individual or entity has more than a reasonable share of the communications media in the State:

> *• A test of substitutability i.e. in assessing the extent to which one communications media may be deemed to be a substitute for another*

> *• Regarding an applicant's ability to influence opinion-forming power, a test of dominance, applying the applicant's audience share of the communications media (in which it holds a substantial or controlling interest), in the State*

3.10.1.f. Applicants are invited to comment on their proposals in the context of the above tests.

The award to **EasyTV** of all three multiplex contracts would not result in the applicant (nor either of its ultimate parent companies or members of their group) having control of, or substantial interests in, an undue amount of the communications media within the State. In common with all other markets, communications markets are now routinely defined and analysed on the basis of the economic substitutability of different communications media, rather than on the basis of the technical equivalence of different technologies.

In that context, there are currently five principal Wireless and Wired technologies used for television reception purposes in the State. These are:

Wireless

- Analogue Terrestrial Transmission

- Digital and Analogue Satellite Transmission

- Digital and Analogue MMDS Transmission

Wired

- Digital and Analogue Cable Distribution

- Digital IP – FTTH Distribution

Although these are all distinct technologies, evidence on their functionality, coverage, take-up and forecast development indicates that they are substitutable.

Substitutability of Television Broadcast Platforms

All five technologies provide channel owners with a platform over which their channels may be distributed to customers and provide customers with the facility to access a range of channels. In addition, all five technologies, to varying degrees, offer customers the opportunity to access a variety of added-value services, such as tele-text, interactive services and record-and-playback capability. The similarity in product characteristics across all five platforms provides a preliminary indication that substitution between them is possible.

Of course, the differing platforms could only be considered as providing substitutable services if there are a significant number of viewers capable of accessing more than one platform and therefore with the ability to switch between technologies. However, the evidence on platform coverage shows that the terrestrial platform and the satellite platform are capable of broadcasting to close to 98% of the population of the State (subject to the viewer having the appropriate receiving equipment), with the cable and MMDS platforms accessible to over 55% of all TV households. On this basis, virtually the entire population has the choice of at least two broadcast platforms (i.e. Terrestrial and Satellite) and more than half enjoy the choice of at least three potential platforms. This further supports the hypothesis that these are likely to be substitutable technologies.

Furthermore, the evidence on the extent of take-up of the various platform technologies is also consistent with a high degree of substitutability between, at least, four of the five technologies. At present, there is a more-or-less even take-up (defined as the primary means of accessing television broadcasts) across the satellite platform (35%), the cable platform (29%) and the terrestrial platform (29%), with the balance accounted for by MMDS (6%) and the emergent IP-FTTH based platforms (1%). Whilst such data cannot be determinative, they amply illustrate that the Terrestrial, Satellite, and Cable and MMDS platforms all hold meaningful mainstream positions, appealing to a broad range of consumers, and cannot be dismissed as niche providers serving only very specific customer groups.

In addition, forecast market developments and the forecast take-up of DTT support the idea of substitutability between technologies. First, although the IP-FTTH based platform currently serves only a small number of viewers, a commercial IP-FTTH based television service is possible as early as the end of this year, and increasing download speeds and other technical developments have led **EasyTV** and their advisors to the conclusion that IP-FTTH based broadcasting could have a share of 4% of TV households by 2015.

More significantly, whilst business forecasts for DTT in Ireland all showing significant take-up, they are sensitive to the specific pricing model adopted and the anticipated pricing response of rival platforms, notably satellite. Indeed, **EasyTV** estimates that take-up of DTT could vary by as much as eight percentage points, depending on a range of factors, including its relative price position (notably against satellite). The own-price and cross-price elasticities implicit in such variation support the view that there is a high degree of substitutability between DTT and the other Television distribution and reception technologies in use in Ireland.

International evidence, notably from Sweden and the Netherlands also demonstrates that effective competition exists between Television distribution and reception technologies in use, in those cases, between terrestrial and cable. Indeed, the marketing claims of the

different media in those countries expressly refer to their price competitiveness vis-à-vis other media in an attempt to induce customer switching.

Thus, all of the evidence, across a range of indicators, is fully consistent with the view of **EasyTV** that the three main broadcast technologies are substitutable, and that IP-FTTH based broadcasting will become increasingly substitutable over the medium term as the technology develops.

Diversity of Communications Media

Even if the analysis is confined to substitutable television distribution and reception technologies, it is not the case that the applicant (nor its parent companies) will have more than a reasonable share of such mechanisms in the State. Most crucially, the future share of broadcast media distributed via the three commercial multiplexes would not be additional to the existing share of broadcast media distributed via the applicants' parent companies because commercial DTT is likely to win the overwhelming share of its custom from those television distribution and reception technologies in which the applicants' parent companies hold their current positions in the State.

Specifically, in contemplation of analogue switch-off, it is forecast that the main sources of business for DTT will be existing Analogue Terrestrial, Analogue and Digital MMDS and Analogue and Digital Cable customers (some Freesat business may also be at risk). **EasyTV**'s best estimate of the post-switch-off, post-DTT position in 2015 is one in which the satellite platform, in which neither the sponsors of this bid have an interest, will have grown its TV household share from around 35% to around 39%. This will make it the single biggest platform. Moreover, within the satellite platform, Sky will have by far the largest share, controlling around 34% of the 39% held by satellite as a whole (with Freesat at 5%).

The position of Digital and Analogue Cable, where LGI has its principal current interest, is forecast to decline slightly, from 29% to 26%, with many analogue cable customers in particular upgrading to digital cable, but many others taking the opportunity to switch platforms to either satellite or DTT. The same is also true for LGI's MMDS customer base which is expected to come under significant competition from the competing satellite and DTT platforms over the coming years. Of course, analogue terrestrial, in which RTÉ has its current position, will disappear entirely, with many of those customers expected to switch to either Free-To-Air or Pay DTT. Moreover, DTT, which is expected to account for about 27% of households, will not be entirely within the control of the commercial multiplexes, but will face ongoing competition from the PSB multiplex. For the reasons set out below, despite RTÉ having an interest in both, it will be entirely appropriate to view the PSB and the commercial multiplexes as independent for the purposes of the competition analysis.

In short, analogue switch-off poses little risk to satellite, with its stable base of installed customers, and for this reason, will continue to be the largest single platform, largely under the control of Sky. The existing positions of RTÉ and, to a lesser extent LGI's platform operations, will be fundamentally altered by analogue switch-off, with much of the growth of DTT coming at the expense of the existing customers of the television distribution and reception technologies utilized by RTÉ and LGI. To a large extent the award of the commercial multiplexes to **EasyTV** would ensure that the current levels of diversity with the media are maintained and in particular ensuring that, on a regional as well as a national, basis that audiences are provided with an appropriate and competitive choice of television distribution and reception technologies and content.

Independent Operation and Control of Content

Finally, as noted above, it would not be appropriate to regard all DTT as being under the control of a single entity if the commercial multiplexes were to be awarded to **EasyTV**. This is so for several reasons. First, the manner in which the PSB multiplex is operated is constrained by RTÉ's obligations as a public service broadcaster. The identity of the channels carried is largely specified and is not at the discretion of the PSB multiplex operator. Second, **EasyTV** will operate on a commercial basis and its operations will be conducted at arms length from the media and related activities conducted by entities within the RTÉ group (including from RTÉ Transmission Network Limited) and within the LGI group.

Overall, therefore, the existence of satellite broadcasting as the largest single platform, dominated as it is by Sky, will provide an effective source of competition to **EasyTV**, as well as ensuring that plurality objectives are met. In addition, the PSB Multiplex will, despite the interest that RTÉ group has in its operation, operate as an independent competitive and opinion-forming rival to **EasyTV**. Competition will also increasingly arise from IP-FTTH based distribution means. In terms of pure opinion-forming power (as opposed to competitive constraints), the position of **EasyTV** will evidently be subject to rivalry from non-broadcast media, such as the Internet, radio and print media, over which **EasyTV** and its parents have little or no control.

Achievement of Statutory and BCI Policy Objectives

3.10.1.g. Please provide a general statement on the nature and duration of your commitment to the orderly establishment, maintenance and operation of DTT in Ireland.

EasyTV has submitted a fully funded business plan for the orderly establishment, maintenance and operation of DTT in Ireland for the duration of the contract (i.e. 12 years). This funding commitment has been approved by the Board of Directors of the **EasyTV** shareholders RTÉCEL and LGI Ventures. This funding is deemed sufficient to fully finance establishment of a thriving DTT platform in Ireland until it becomes cash flow positive on a standalone basis. This commitment has a degree of headroom which the Applicants believe takes into account reasonable sensitivities.

A shareholders agreement for **EasyTV** has been drawn-up and signed by RTÉ and Liberty Global that guarantees that **EasyTV** will have an independent management team with an independent chairperson. Both RTÉ and Liberty Global regard the success of **EasyTV** as strategically important and are fully committed behind **EasyTV** and the establishment of a successful DTT service in Ireland.

It is the Commission's policy that a driver or champion for DTT is highly desirable for the promotion and success of the platform.

3.10.1.h. What proposals, if any, do you have for co-operating with other multiplex operators in the promotion of the platform, both at the launch of DTT and over the period of the multiplex contract? Please comment on your willingness to collaborate with other DTT multiplex operators and to participate in the promotion of the platform.

EasyTV is bidding for all three multiplexes and, if successful, with RTÉ would develop and manage a common EPG covering all FTA and pay channels. The EPG data will be common to the platform, across all multiplexes.

EasyTV is bidding for all three multiplexes and, if successful, with RTÉ would execute a fully coordinated strategy for dissemination of information nationally about analogue switch-off and the move to digital. **EasyTV** has allocated a significant proportion of its marketing budget (up to ASO) of €7.7 million specifically for this type of activity. This activity will also be coordinated with the DCENR to fully leverage the government investment in publicising and promoting the analogue switch off. In addition we have designed the timing and scale of the transmission rollout to ensure a critical mass of consumer take-up at the earliest juncture and in doing so have closely aligned to the rollout desired by RTÉNL to meet their public sector transmission obligations.

The public service broadcast channels will be given priority on the EPG in terms of sequence. The sequence will facilitate and ease the effective use of the EPG for those DTT users who are not subscribing to any incremental tiers. In addition, **EasyTV** would on a platform neutral basis coordinate with the government to provide support for specific sections of the community, particularly those people who are eligible for free TV licences paid for by the Department of Social and Family Affairs, to facilitate their entry into digital terrestrial television.

The BCI wishes to accommodate and recognise any innovative proposals that would have a beneficial influence on the development of the DTT platform and are not adequately addressed under the earlier criteria (a) to (g).

3.10.1.j. What aspects, if any, of your application do you believe are innovative and will contribute to the success of DTT? How would you describe the benefits and costs of the proposal(s) and confirm the extent to which they are reflected in the business plan and financial projections.

EasyTV will participate with RTÉ in the development and on-going management of a common EPG covering all FTA and pay channels. This enhanced EPG will have the same look and feel on all receivers; it will be fast and efficient; offer enhanced features such programme by genre and series linking, picture-in-picture support, image and graphic support; easily modifiable presentation (no OTA software download required); and support for return path connectivity. **EasyTV** has budgeted €200k (in its financial plan for 2009) for the development of this state-of-the-art EPG and will leverage the full expertise of Liberty Global and RTÉs development laboratories.

EasyTV has a well defined roadmap for future interactive services and regards IP return path technology as a significant opportunity to offer the viewer a wide range of exciting new services. In particular it will enable the viewer to avail of on-demand programme services, as well as the linear services currently available. For example as well as the traditional 'look-forward' EPG, the viewer could avail of a 'look back' EPG which would enable them to view programmes they may have missed on an on-demand basis. These programmes will be delivered over the IP return path either as a streaming service or video download. The provision of an Ethernet interface has been included as part of the specification for all **EasyTV** STBs and included in the retail cost. **EasyTV** has fully budgeted for the on-going

development of its EPG to cover future developments such as those mentioned above. **EasyTV** has budgeted €200k (in its financial plan for 2010) for this development plus an annual maintenance cost of €20k.

EasyTV has developed a marketing rollout plan that specifically targets as a high priority those parts of the country that will lose, or suffer significant degradation, in the overspill service they are currently receiving from UK analogue TV. This plan involves significant local marketing in towns down the east coast of Ireland in advance of the UK ASO. The marketing cost associated with this strategy has been fully budgeted for in the **EasyTV** business plan.

The BCI will have regard to whether the success of the DTT platform is likely to be better served by awarding the three multiplex contracts to a single applicant (or two or more applicants acting in a coordinated manner) through a series of conditional applications or to three applicants acting independently.

3.10.1.k. What are the specific merits, if any, of your application viz a viz the inclusion or exclusion of any related conditionality with regard to the success of the DTT platform as a whole?

EasyTV believe there would be a number of significant issues should Multiplex licences be awarded to more than one DTT provider. These are as follows:

- Ensuring that a single common EPG is available for all consumers (both FTA only and Pay-TV subscribers) becomes that much more difficult to satisfactorily implement. At best it is likely to result in a less sophisticated EPG offering to consumers than **EasyTV** is proposing as part of its bid.

- It is quite likely that different conditional access systems would be deployed by different DTT operators resulting in the customer having at best two different CA modules on their STB (or in a worst case having to purchase multiple STBs). The need for the consumer to switch between different CA modules and associated smartcards in order to view different channels would be confusing and not very consumer friendly.

- There is likely to be a disjointed approach by each of the separate DTT operators to the specification and procurement of STBs. If this happens then any potential economies of scale will be lost. The need to support different CA systems would drive up the cost of consumers acquiring DTT by requiring support for CA modules within any STB and the purchase by the consumer of CAMs for each DTT operator.

- There will be confusion at the consumer level as to who is providing DTT services; the differences between these different DTT services and the benefits of choosing DTT (with a significantly reduced number of channels) over other alternative platforms such as Cable or Satellite. This will inevitably lead to a weakening or undermining of any coordinated approach to a DTT awareness campaign.

Although potentially all of the above issues could be overcome with sufficient effort, time and money, the fact remains that for any DTT operation to be successful it needs a certain level of scale in terms of customers and turnover. We believe it would be very difficult for any DTT operator to guarantee financial viability with only one or two Multiplexes.

Enhancing Competition

The move from Analogue to Digital Television Transmission is part of a wider convergence of all tradition communication mediums (i.e. TV, Radio, Newspapers etc.) with telecommunication services (i.e. voice and data) all delivered using a common IP technology and infrastructure. Digital expands capacity hugely even over today's infrastructure (i.e. fibre speeds over copper) but as next generation access networks come on stream the capacity available will eventually make Internet access to TV content more dominant than that of traditional wireless access where bandwidth constraints will always limit the range and diversity of the content offering.

The **EasyTV** consortium members are significant players in the TV Market within Ireland in terms of wireless and cable access but have very low market share in terms of Internet access.

The national coverage for cable is unlikely to increase significantly over the next 12 years and the wireless coverage although having 90% plus coverage is never going to match the reach or capacity of satellite and copper for delivery of digital services.

Independent market research has shown that if **EasyTV** is awarded the DTT licence, the the dominant player in TV services by 2015 will be Sky using satellite. Liberty Global through its holding in UPC Broadband and partnership the **EasyTV** consortium will have a total market share of TV which is comparable if not slightly less than that of Sky.

In many parts of rural Ireland where cable is not an option (and MMDS reception is poor) Sky's share of the TV market is significantly higher than its reported national market share. With the potential withdrawal of the MMDS spectrum in 2014 this dominance will be significantly increased. The **EasyTV** consortium will provide a truly competitive TV offering both in terms of quality of programming and cost to these regions.

Avoidance of VAT on DTT Services

EasyTV will be an Irish registered company which is subject to compliance with Irish Tax regulations in all respects.

It is the policy of **EasyTV** to acquire programme content for delivery to RTÉNL in Ireland and, on receipt, all such content will be multiplexed in Ireland by RTÉNL who will then distribute and transmit the completed multiplexes to **EasyTV**'s customers using RTÉNL's dedicated Irish DTT network. For the avoidance of doubt, in these circumstances, **EasyTV** are advised that all subscription charges levied on Irish DTT customers will be fully subject to Irish V.A.T.

EasyTV is aware that other models based on the delivery of content to RTÉNL for VAT purposes taking place in countries outside of the jurisdiction (e.g. Luxembourg where we understand V.A.T. on broadcasting services has been levied at a rate of 3% since 2007) have been intimated. If legitimate, such mechanisms might have the effect of reducing the

level of Irish V.A.T. payable by as much as €90 million over the course of the proposed licence term.

EasyTV has taken the view that it would be imprudent to:

- Submit a proposal for the award of Irish national spectrum for Commercial DTT multiplexes which in effect was structured to be financially underpinned by the avoidance of material Irish VAT liabilities; and

- Rely on tax planning in respect of the avoidance of VAT obligations in a manner as adverted to above which **EasyTV** are advised may be successfully challenged by the Irish VAT Authorities.

Availability of Receiver Equipment

EasyTV will support and encourage the development of a competitive horizontal market for supply of set top box and integrated digital TV receivers that meet the functionality requirements as defined by BCI. However based upon its own research, and initial feedback from CEDA, it does not believe that such a market will exist in 2009. It has therefore taken the decision to seed the market with STBs by specifying requirements, procuring initial volume production and creating and support a distribution and retail channel to get these STBs to as many consumers as possible at the lowest possible cost.

Although **EasyTV's** prime concern is to make STBs available for Pay-TV customers, it is willing to support the wider BCI objectives by using its purchasing power and distribution channels to enable the availability of a low cost STB within the market for FTA only customers.

Cross-Subsidisation of Services

EasyTV has deliberately avoided any attempt to hide the true costs of the DTT service by proposing to link the availability of a free STB with the purchase of other services such as line rental, broadband or voice services. In our view such an approach would be deemed anti-competitive and potentially subject to legal challenge.

Such an approach would also result in DTT customers being locked-in to potentially unnecessary, expensive and long term contracts for additional services (e.g. line rental, broadband or voice) and consequently being unable to take advantages of competitive offers in these markets as they emerge. Conversely, adverse competitive pressures in these markets could also result in future unwarranted price increases to DTT customers as a result of shrinking margins in unrelated product areas.

EasyTV believes that the best approach is to make pricing fully transparent, to allow customers to purchase just those services they require (e.g. customers should be able to buy a STB without the need to also purchase Pay-TV services or indeed any other service). **EasyTV** did consider increasing the subscription price for its Pay TV service to cover the cost of providing customers with a free STB. However it was felt that this would restrict customer choice and has instead proposed a rental option for STBs to spread the up-front costs and thereby allow consumers to take advantage of a competitive STB provider market as it emerges over time.

Glossary

Term	Definition
Analogue Switch off (ASO)	The date on which the final transmitter broadcasting analogue terrestrial television signals
Conditional Access (CA)	Scrambling and encryption technologies that allow a broadcaster to restrict reception of its digital channels to consumers who have been authorised to view them. Typically used by pay TV operators to protect subscription and pay per view revenues.
Conditional Access Module (CAM)	A device inserted into a set-top box or integrated digital TV which allows digital services protected with different Conditional Access technologies to be displayed.
Digital Terrestrial Television (DTT)	The digital television distribution network based on terrestrial transmitter towers.
Digital Video Recorder (DVR)	A device for recording digital television broadcasts, typically using a computer hard disk with a set-top box. Also known as a personal video recorder (PVR) and digital television recorder (DTR).
Electronic Programme Guide (EPG)	An on-screen guide to scheduled broadcast television programmes, allowing a viewer to navigate and select content by time, title, channel and genre.
Free To Air (FTA)	The transmission of digital television (and radio) services without conditional access.
High Definition (HD) / High Definition Television (HDTV)	A television picture format that has higher picture resolution than 'standard definition' services.
Integrated Digital Television (IDTV)	A television set which has a built in digital tuner and receiver (typically for reception of digital terrestrial TV). IDTVs remove the need for an external set-top box.
MPEG2	The digital technology used to compress the video component of the majority of digital television services.
MPEG4 H264/AVC (MPEG4)	A relatively new digital compression technology which is more efficient than MPEG2. Commonly referred to as MPEG4.
Multiplex (MUX)	The combination of a number of digital television and radio services into a single datastream in order that they can be transmitted on a network. The DTT platform currently consists of 6 multiplexes.
Set-Top Box (STB)	A digital television receiver that is connected to a television display. A STB may also include DTR

Term	Definition
	capabilities.