

DEMAND ESTIMATION AND MARKETING PLAN FOR VARIETIZE TECHNOLOGIES

by

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ABSTRACT

This study is a demand estimation and marketing plan for Varietize Technologies – a Vancouver based R&D company that is introducing its first product. Varietize recognized the market opportunity for its latest designed product, the “iTV” – a product that interfaces between the Internet and the TV to allow access for online TV content.

The study begins with a demand analysis section that uses Prof. Meredith’s model that categorizes different demand factors and determinants to look into different demand influencing factors. Demand estimation is then completed in the second section using the previous analysis as a research guideline and incorporating the output of a consumer survey integrated with secondary data to achieve a reasonable estimate. The study ends with a strategic marketing plan for launching the iTV in Canada. This plan is based on findings from the previous sections and on marketing concepts for technological innovations.

DEDICATION

I dedicate this work to my loving wife Mariam, whose thoughtfulness, encouragement and patience were inspirational during my trip to complete my degree and this study.

I also dedicate this work to my son Jawad and my daughter Taleen, who missed a lot of their dad's care during his studies.

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LIST OF ABBREVIATIONS

ATI	Advanced Technologies Inc.
CRTC	Canadian Radio-Television Commission
CUPE	Canadian Union of Public Employees
DSL	Digital Subscriber Line (Internet service whose speed is faster than dial-up)
HDTV	High Definition Television
IPTV	Internet Protocol Television
ISP	Internet Service Provider
LCD	Liquid Crystal Display
VAR	Value Added Reseller
VoD	Video on Demand

1 INTRODUCTION

1.1 History and Background

Varietize Technologies is an R&D company that specializes in the design of hi-tech electronic products. It is currently owned by two electronics engineering PhDs, who have over 30 years of collective design experience in video and telecommunication fields. Previously, the company had not attempted to commercialize any of its designed products due to their market infeasibility.

Varietize technologies is in the process of developing a unique product for the rapidly expanding Internet video market. This product will be useful for viewing online TV/Video on Demand (VoD) The Internet video market is experiencing significant changes in terms of the variety of offerings, including streamed live channels and other applications. A large number of TV stations such as Bloomberg are streaming their live programs on the Internet for free while others such as the ABC and CTV networks are streaming their recorded programs.¹ Other companies like BlipTV² and JumpTV³ are offering subscribed online video services that include movies, sports and TV stations live streams. With this variety, consumers are beginning to find their TV or video needs on

¹ [wwitv.com](http://www.wwitv.com)

² Carol Wilson, "Web-based Video Offers More Choice," *Telephony: VOD 2.0* (2006), <http://www.proquest.com/>.

³ www.jumptv.com

the Internet and this is driving them to rely on Internet TV as a major source for their TV service.⁴

Currently, Internet video content is viewed through a computer by accessing the internet link for this content. Content is displayed on the user's computer monitor, which is inconvenient if this content is to be shared by several persons when it is displayed. Efforts have been made to allow consumers to view Internet video content in an environment similar to that of traditional TV services like cable or satellite TV. Products in this regard include internal computer video cards with a special interface that allows a TV cable to connect the computer to a normal TV. This solution simply displays the image on the TV instead of the computer monitor without improving the video quality. Another product is the PC-TV converter that is externally interfaced between the normal video card and the TV. This product resolves quality issues by converting the image to fit with the normal TV but does not solve the problem related to the inconvenience of attending a computer workstation to control the content displayed. Other products are the latest TVs such as LCD, Plasma and HDTV that are equipped with a video interface similar to that of a computer monitor, allowing them to be connected to any computer using a normal computer monitor cable. A good image quality is achieved through these types of TVs but issues related to inconvenience are not resolved.

Varietize's new product will solve issues that exist with these methods. It will allow the user to access online TV or online Video on Demand content on the TV without the need of a computer. Future software releases of the same hardware will be capable of

⁴ Carol Wilson, "Web-based Video Offers More Choice," *Telephony: VOD 2.0* (2006), <http://www.proquest.com/>.

including other online video content like YouTube.⁵ The product interfaces between a digital subscriber line (DSL) Internet connection and a TV set and will convert the Internet TV content to an MPEG-4 video format that is suitable for a normal TV, an LCD TV or a plasma TV. HDTVs will be supported in future software releases of the product. The product will be half the size of a satellite receiver and will be called the “iTV.” Content can be accessed through a remote control unit in an environment similar to traditional TV service.

1.2 Purpose

It is worth noting that currently Varietize has no core competencies in strategic marketing and financial aspects. The company founders are targeting the patent application and prototype development in 2007 and are planning to launch their product in the beginning of 2008. However, they have insufficient funds for patenting, prototype development and marketing, so they are planning to approach angel investors to fulfil their funding requirements. A business and a marketing plan will be required for this purpose.

In this study, we will analyze product demand, estimate demand and develop a marketing plan for the Canadian market. The demand analysis will explore different aspects of demand for the product and will be used as an input for the demand estimation and for the recommended marketing plan. The study will include most of the information and analysis needed for preparing a suitable business plan that will be presented to investors. However, it does not only serve the need for investment request requirement,

⁵ www.youtube.com – An online video content provider that allows consumers to publish their own video through its server.

although the primary motive of this study was the need for funding, for there are other benefits. First, it will help the company avoid any marketing gaps that may be crucial for the success of its first commercialized product and hence the future success of the whole company. Second, it will provide the company with a structured and theoretical method for demand estimation and marketing strategy that may be applicable in the future for the iTV and for future products.

1.3 Paper Outline

The first section of this paper will be the demand analysis. In this part, we will discuss different factors and determinants of the product market demand. Some of these factors should be considered for short term estimation while others should be revisited for future plans. By analyzing these different factors and determinants we will be able to move to the next section, since we will have gathered needed information such as sales origin, legal and technological trends, complementary products and economic value to the consumer.

In the second section, we will list several research questions that should be answered in order to estimate the demand for the iTV. These research questions will be answered through primary and secondary research. Primary data gathering was achieved through an online consumer survey conducted within the SFU community. The collected data from the participants in this survey will be analyzed for the purpose of demand estimation and marketing strategy. Secondary data gathering will be achieved through published studies, articles or industry statistics. By analyzing and combining information

from these primary and secondary sources, we will be able to get the demand estimate for the iTV during the first year in the Canadian market i.e. 2008.

The last section is the recommended marketing plan. The demand analysis and demand estimation sections are the major input for the marketing plan. Having identified different determinants for product demand, these determinants are taken into consideration in implementing a marketing strategy. In addition, the consumer survey brought valuable information about consumer perspectives on the iTV. In this survey, information related to consumer viewpoints and preferences, such as store preference, information search, motivations, willingness to buy and product attribute importance were explored. Such information will be used to get a close demand estimate and will provide excellent feedback for the marketing strategy. The marketing plan part will include a situation analysis in which we will talk in detail about our beachhead market segment and about key success factors. It will also include a marketing strategy in which we recommend suitable positioning, promotional activities and channel decisions. Finally, we will present an organized approach for implementing and controlling the marketing plan.

2 DEMAND ANALYSIS

In order to achieve a realistic estimate of our product demand, the Meredith model will be used.⁶ This model provides a general comprehensive approach to analyze demand by splitting possible factors that affect demand into 16 categories. However, this model does not provide techniques for gathering demand and market information. Instead, by pointing to different market factors, it acts as a guideline for researchers who are seeking such information. In addition, the output from this model is not only a demand analysis but also a detailed product market analysis, which provides valuable input for the product marketing strategy. Since our product is a new innovation, not all categories may be applicable. We will identify and analyze the applicable categories in the following parts of this section.

2.1 Environmental Scanning: Macro and Industry Determinants

The following macro and industry determinants have been identified:

1. Legal Trends
2. Technological Trends
3. Market Growth
4. Negotiation Power

⁶ Lindsay Meredith, "A Diagrammatical Template for Business Market Demand Estimation," *Industrial Marketing Management* 35, no. 4 (2006): 431-445, <http://www.proquest.com/>.

2.1.1 Legal Trends

When some companies in Canada like JumpTV and ICraveTV started retransmitting the TV signal of some Canadian stations on the Internet, a legal issue was raised by these Canadian stations. This led to a Canadian regulation in 2003 that considered retransmitting TV signals without permission as illegal. To allow permission, Canada's Telecom regulators requested a royalty fee that will be distributed to TV stations.⁷ While this applies to stations that refuse to give permission, it does not apply to stations that are already transmitting on free to air satellite, including a large variety of international stations. It is likely that these stations will not object to their signal being retransmitted on the Internet since this will result in a higher exposure to consumers without any cost for them.

However, the above regulation was threatened after a new issue that is related to Internet neutrality arose in Canada. Internet neutrality refers to the prevention of any Internet or telecom service provider from interfering in content delivered over their network. After the US telecom providers convinced the congress to gut this neutrality in summer 2006, this issue arrived in Canada and the policy is under review.⁸ If Canada follows the United States in this regard, our concern will be whether Telus, Rogers, Shaw and other providers bargain to prevent some content, especially the content that overlaps with their offerings, from utilizing their infrastructure. This will reduce the variety of content that could be viewed through our product.

⁷ Outlaw News 2003, "Canada Limited Webcasting of TV Programs," <http://www.out-law.com/page-3256>.

⁸ The Canadian Press, "Battle over 'Net Neutrality' Arrived in Canada," <http://www.cbc.ca/technology/story/2006/11/02/tech-neutrality.html>.

Another legal trend is related to how cable companies sell their services. It is well known that cable TV subscribers prefer unpackaged channels so they can pay for individual channels instead of paying for the whole package. However, the Canadian Radio-Television Commission (CRTC) does not allow cable companies to sell individual channels to consumers and this regulation will stay at least until 2010.⁹ The current regulation provides consumers with a motive to shift to other TV services, such as online TV.

A final note about the above-mentioned legal trends is that they have a minor impact on our short term demand estimate. Currently, competition is already taking place between the TV providers (Shaw, Rogers, etc...) on one side and the online TV providers on the other. However, the majority of consumers are not seeing a complete solution from online TV providers and this is causing traditional TV providers to be less concerned. Because our product will initially target current users of online TV, we do not think that we will create a big risk for TV providers. In the longer term, we expect that other niches will see the combination of iTV and online TV service as a substitute for traditional TV services. In this case, current adopters of TV services will switch to the new solution and here is where we expect current TV providers to respond to the threat by utilizing any of the above-mentioned legal trends. On the other hand, the effect of allowing TV service providers to offer individual channels for their subscribers should be considered for long term demand since the current regulation will be active until 2010.

⁹ "Loading up the Cable," *Shareowner* (2006), <http://www.proquest.com/>.

2.1.2 Technological Trends

In 2003, 6.7 million Canadian households (representing 55% of total households) had Internet service at home, including an estimated 4.4 million subscribers with DSL Internet service.¹⁰ The motivation by consumers to adopt our product is expected to be impacted positively if the consumer already has an Internet service at home.

The number of stations that are streaming their live signal through the Internet is also increasing. About 25 Canadian TV channels broadcast their signal on the Internet for free. Appendix 1 includes a list of all these channels. In addition, looking at one of the biggest communities in Canada, there are more than 35 Chinese channels broadcasting on the Internet for free.¹¹ Appendix 2 lists all these channels. Many other communities may have free access to their TV choices through the Internet and many of these channels do not overlap with what TV providers are offering. As more channels stream their signal onto the Internet, we expect the adoption of our product to be impacted positively.

Another interesting trend is the bandwidth crunch that cable and satellite carriers are facing after adding high definition TV service to their offerings.¹² The inefficiency of pumping a large number of HD channels to the customer's home has cable carriers investing in technology that allows them to stream individual channels. Recently, a French channel called "Planete" was dropped by Bell Express Vu, Canada's largest satellite carrier. Bell justified this decision by the fact that this channel has low audience numbers and that there is a need for extra bandwidth to offer other channels. From this

¹⁰ Statistics Canada 2004, "Household Internet Use Survey," <http://www.statcan.ca/Daily/English/040708/d040708a.htm>.

¹¹ WWITV website, "Online TV Listings," <http://wwitv.com/portal.htm>.

¹² Grant Robertson, "HD Channels Crowding the TV Dial," *The Globe and Mail* (2007), <http://www.theglobeandmail.com/servlet/story/RTGAM.20070306.whdtv0307/EmailBNStory/Business/home>.

event, we can infer the flexibility of online TV and we can expect that a dropped channel may consider streaming their content online, especially when they see online TV as a complete solution with the presence of iTV. This presence may also cause cable distributors to think of our product as a way of avoiding trying to deliver a huge number of channels to consumers. Instead of facing resistance from cable TV providers who may utilize future regulations mentioned in the previous sub-section, Varietize may consider forming strategic partnerships with these providers in the longer term. In this way, cable TV providers who are also offering Internet services can bundle the iTV with these services for consumers who need access to dropped channels. The impact of these opportunities on iTV would be a significantly higher diffusion rate.

2.1.3 Market Growth

More than 80% of Canadian households are current subscribers to a TV service. Some of these TV subscribers are shifting to Internet protocol television (IPTV), a new Internet based TV service. It is estimated that by 2008, about 1.4 million Canadian households will be getting IPTV service.¹³ We think that our product would compete successfully in this developing market.

2.1.4 Negotiation Power

It is apparent that the bargaining power for TV service is with TV providers. This is due to the existing oligopoly in this industry. As an indirect substitute for traditional TV service, our product will be impacted positively. On the other hand, Internet service that is complementary to our product is offered in an oligopolistic market, which creates

¹³ Jeff Leiper, "The Battle for Internet TV," *Marketing* (2006), <http://www.proquest.com/>.

for us some dependency on Internet Service Providers (ISP) service charges. The impact will be negative on our product adoption, especially when targeting consumers that do not have an existing Internet service.

2.2 Derived Demand

The demand for our product is derived from the demand for online TV/VoD content. Demand for online TV content is influenced by the limited availability and relatively higher cost of this content on other sources like cable TV, IPTV or satellite. The emergence of a convenient way for viewing online TV, made possible through iTV, will be also a strong influence on the demand for online TV. Adopters of our product can be split into three main categories:

- Consumers who are currently viewing online TV/VoD on their TV's using current indirect substitute products.
- Consumers who are currently viewing online TV/VoD using their PC monitor.
- Consumers who have a DSL Internet service at home but currently don't view online TV.

Demand from early adopters will derive from the first two categories, since consumers in these categories require only one technological shift to adopt our product unlike consumers in the third category who require two technological shifts. Two important needs can be fulfilled by adopting the iTV:

- The need to view online TV/VoD content in a more convenient way.

- The need to view special content like ethnic programming or online TV channels from home countries that may not be offered by normal TV providers.

2.3 Complementary Products

There are two complementary products that influence the demand for iTV. These are Internet service and online TV/VoD content. We discussed the trends for Internet service in the technological trends sub-section and introduced the influence of online video content on demand. Since the Internet is becoming an essential service at home, a deeper examination of the trends surrounding online TV is required. The World Wide Web is becoming an important video distribution source with more than 50,000 online video producers.¹⁴ This includes not only publicized video content websites such as “www.youtube.com” but also live TV broadcasting stations such as ABC TV, who are now streaming television shows on the web one day after they are broadcasted on the network.¹⁵ In addition, some companies such as AOL and Blip TV are allowing customers to program their own shows based on available offerings for regular audiences.¹⁶ The shift to viewing TV on the web and the variety of online video options will drive the need for a complementary product like the iTV that provides consumers with an environment similar to traditional TV.

2.4 Cannibalization

Our product is expected to gain market share mainly from indirect substitute products. Three indirect substitute products are identified: PC-TV converters, computer

¹⁴ Carol Wilson, “Consumer Takes Control,” *Telephony* (2006), <http://www.proquest.com/>.

¹⁵ Ibid

¹⁶ Carol Wilson, “Web-based Video Offers More Choice,” *Telephony: VOD 2.0* (2006), <http://www.proquest.com/>.

video cards with TV interfaces and advanced TV's (LCD, Plasma and HDTVs). The motive for buying the first two substitutes is viewing computer and online content on the TV and this motive partly overlaps with the motive to buy iTV for viewing online TV content. Since our product does not provide all the capabilities of these two indirect substitutes, we expect cannibalization to occur with consumers desiring to view online TV/VoD content on their TVs. As for advanced TVs, we do not think that the motive to buy this substitute involves viewing computer or online content. While we think that advanced TVs are substitutes for the iTV, we do not expect our product to be a substitute for an LCD, Plasma or HDTV due to the different needs that initiate the purchase of these TVs and we do not expect to cannibalize their sales.

Cannibalization is also expected to affect indirect substitute services but with lower penetration. Three indirect substitute services are identified: satellite TV service, cable TV service and IPTV. There are two categories of satellite channels: free to air and encrypted. Free to air channels can be viewed without any monthly subscriptions and many of these can be also viewed through the Internet for free. Encrypted channels require a monthly subscription fee. Some of these are also offered online for lower fees but few of them can be accessed for free. Cannibalization from cable TV service and IPTV service will be possible via customers who have an interest in specific channels that can be accessed through the cable TV or IPTV service as well as on the Internet. Examples of these channels are Bloomberg, CTV and other local stations.

2.5 Sales Origin Analysis

Sales are expected to mainly originate from the following directions:

- Consumers who are using current indirect substitute products to view online TV/VoD channels. Consumers in this category face several issues:
 - The inability to use the computer for other purposes while viewing online TV.
 - The need to attend the computer to browse channels.
 - Space requirement for a computer next to the TV.
 - Image quality issues (only for video card with TV-out)

These consumers may prefer our product because it will solve these issues. Sales from this direction are expected to cannibalize indirect substitute products, even with their lower price advantage.

- Consumers who are viewing free online TV channels on their computer monitor. Consumers in this category are facing some inconvenience with their relatively smaller computer monitors. But they do not see a big advantage with current indirect substitute products due to the issues mentioned above. Sales from this direction are not expected to cannibalize competitors' products.
- Consumers who currently do not view online TV channels and who need ethnic programming or home country channels that are available online but may not be offered by current TV service providers. Consumers in this category will be motivated to adopt our product and will consider it as another source of TV service

due to its similar environment to traditional TV. Moreover, these consumers will be highly motivated if they are already subscribed to a DSL Internet service. While the majority of consumers in this category are expected to be late adopters of iTV, we expect that, due to the diverse ethnicity of Canada, a small portion of this category will create a significant demand.

2.6 Indirect Substitute Services

Traditional TV services are considered indirect substitutes since they are substitutes for online TV. In this sub-section, the marketing mix for three indirect competitors who provide TV services will be presented. These competitors are:

1. Shaw Cablesystems
2. Telus
3. ViewsatCanadaRetail

2.6.1 Shaw Cablesystems

Shaw Cablesystems offers a variety of TV services that include TV channels and Pay-Per-View. It also offers Internet services and digital phone services. The basic cable TV package is offered for \$27 per month and includes all major Canadian and US networks. After exploring some of the channels offered by Shaw, we found that five of these channels can be accessed for free on the Internet in addition to some recorded Canadian news channels.

Shaw is the second largest cable company in Canada with over 2 million basic cable TV subscribers and 1.5 million DSL Internet subscribers.¹⁷ Customer support is provided around the clock. Shaw also provides several customer care features: e-bill, online support, easy moves and low switching costs. Shaw uses direct sales as one option to promote and sell its products with their website, where all prices and offers are listed. Media advertising is another source for promotion, mainly through direct mail, print and TV ads.

2.6.2 Telus

Telus entered the TV business recently through the IPTV technology. Due to the technological limitations of this technology, the consumer should be subscribed to a Telus phone and DSL service in order to subscribe to the Telus IPTV. For a month-to-month subscription term, Telus charges a rental fee of \$10 per month for required hardware and a subscription fee of \$22 per month for the basic channels that are similar to those offered by Shaw cable. High speed Internet costs about \$31 per month.

Strong competition is taking place between Telus and Shaw. With its new TV service, Telus is cannibalizing some of the Shaw TV market share. However, the battle between Shaw and Telus was started by the former when its new digital phone service started cannibalizing Telus's phone market share. There are no current market share estimates for Telus TV, since they started offering the service just recently. However,

¹⁷ "Industry Study - Company Profiles," *Shareowner* (2006), <http://www.proquest.com/>.

their forecast for 2008 is estimated to be 332,000 subscribers out of the total 1.4 million subscribers forecasted for the same year.¹⁸

Telus's marketing strategy is very similar to the strategy followed by Shaw except that they bind their customers with high switching costs whenever they introduce limited time offers.

2.6.3 ViewsatCanadaRetail

ViewsatCanadaRetail is the exclusive Canadian distributor for Viewsat satellite receivers. Several retailers carry their products and their listed pricing starts from \$200. Retailers are available in different regions. In addition, custom installers play a big role in the accessibility to this market. Several of these installers promote different satellite brands and act as resellers as well. Ordering can be done online and delivery is available to all Canadian regions. In addition to the satellite cost, consumers have to pay a cost of approximately \$150. These extra charges include the cost of a dish, accessories and installation.

2.7 Indirect Substitute Products

Referring to the cannibalization sub-section, we considered two indirect substitute products to be of major interest for analysis: the Video card with TV-out and the PC-TV converter. We are more interested in these two substitutes since they fulfil customer needs that are similar to those fulfilled by our product, knowing that this is not the case

¹⁸ Jeff Leiper, "The battle for Internet TV," *Marketing* (2006), <http://www.proquest.com/>.

for the third indirect substitute (Advanced TV). Two competitors will be discussed:

Advanced Technologies, Inc (ATI) and AverMedia.

ATI is a leader in chip manufacturing that specializes in video applications. The company was acquired recently by Advanced Micro Devices (AMD), a computer chip manufacturer. ATI has a variety of video cards that suit consumer's basic and advanced requirements. One popular video card with TV-out that fulfils the requirements for online TV is the **ATI Radeon 9250**. A number of PC manufacturers are equipping their computers with this card. This card sells for \$70 at NCIX,¹⁹ an online retailer that serves Canada and USA.

AverMedia is a global company that originates in Taiwan and specializes in the design and manufacturing of presentation and multimedia products. The company has branch offices in seven different countries on three continents. AverMedia claims a 20% global market share in the computer-TV converter products category.²⁰ Due to their high global market share, AverMedia has developed strong alliances with distributors, retailers, E-tailers and Value Added Resellers (VARs). The **QuickPlay PC-TV** converter is the AverMedia product whose sales are expected to be cannibalized by the iTV. One major VAR in Canada is Tigerdirect²¹ who sells the QuickPlay for \$96.

¹⁹ www.ncix.com

²⁰ Milton Keynes, "Enta Group to Distribute AverMedia Product Portfolio," Press Release (2005), [http://www.averm.co.uk/avermedia/media_room/Press%20Release%20-%20AverMedia%20appoints%20ENTA%20\(20July2005\).pdf](http://www.averm.co.uk/avermedia/media_room/Press%20Release%20-%20AverMedia%20appoints%20ENTA%20(20July2005).pdf).

²¹ www.tigerdirect.ca

2.8 Company Product

Our product is expected to retail between \$150 and \$250 with a one year warranty. A conservative life period for our product is estimated to be 2 years. The retail price range is based on the price of a satellite receiver and the two years rental cost of the set-top box that is used with the IPTV service. The former is sold for around \$200 while the latter's rental cost over two years is \$240. The first version of our product is designed to serve customers interested in online TV/VoD offerings, while later versions will support other online video content like YouTube. Brand awareness will be built through advertising on the websites of online TV providers, on the expectation that they will not reject our product since it is likely to increase their revenues, while traditional TV providers may consider our product a threat and may not be willing to cooperate. In addition, distribution channels used for our existing indirect substitute products would be suitable for the iTV. However, access to these distributors will be difficult without demonstrated demand for our product, given the conflict it creates between distributors and current competitors. Also, carrying a product with no demonstrated demand will create a higher risk for distributors, which will force them to request a higher margin than what is requested from our competitors. This may lead us to initially select online sales as our channel of distribution. Our product sales origin makes online sales a good channel since customers are already paying for their online TV services through the web so no behavioural changes are required by them to buy our product online. When we start targeting other niches, we expect to have a demonstrated demand for the iTV and this will make it easier to access big distributors or retailers.

2.9 Economic Value to Customer Analysis

In this analysis, we will select different scenarios for different customer categories and calculate their economic value achieved by adopting our product. We will use 2 years as the period of analysis since this is the assumed life period of our product.

2.9.1 Scenario 1: Current Adopter of Online TV (Beachhead Market)

A customer using AverMedia's QuickPlay PC-TV converter will pay \$96 while a consumer using the ATI Radeon 9250 video card with TV-out will pay \$70. However, both consumers will need to keep their PC running, which will add some constraints on their PC usage. If they need longer hours of access to Internet TV/video, then this will create high inconvenience. One option would be to buy an additional PC, which allows the consumer to separate their Internet video usage from their normal PC usage. The cost of an average PC is \$500, while the cost of a basic PC that excludes the monitor will be \$300. If the iTV is priced between \$150 and \$250, a consumer saves between \$120 and \$246. By considering the convenience that the iTV brings, the economic value will be higher though it will vary between different consumers. A consumer whose total daily hours spent watching online TV is significant and who has a high frequency of switching between channels will probably value our product most.

Table 2.1: Indirect Substitute Product Cost Analysis

Quickplay PC-TV Converter Cost Analysis		Video Card with TV-out Cost Analysis	
Cost of Converter	\$96	Cost of Video Card	\$70
Cost of an Additional PC Excluding a Monitor	\$300	Cost of an Additional PC Excluding a monitor	\$300
Total Cost	\$396	Total Cost	\$370

2.9.2 Scenario 2: Shaw Cable Adopter

A Shaw cable customer who is also subscribed to Shaw DSL Internet service pays \$22 per month for basic cable service. The total cost of basic cable TV service for two years is \$528. If the available free online TV channels satisfy this consumer, he or she can cancel the cable service after adopting our product, which saves him or her between \$278 and \$378. By considering the additional satisfaction achieved due to the free access to a massive number of online channels, the economic value may be higher than \$378 for the 2-year duration.

Table 2.2: Shaw Cable Consumer Analysis

Shaw Cable Consumer Analysis	
Monthly Basic Cable TV Charges	\$22
Charges for 2 years	\$528
iTV Cost	\$150-\$250
Economic Value	\$278-\$378

2.9.3 Scenario 3: Telus TV (IPTV) Adopter

A Telus TV customer who is also subscribed to a Telus DSL Internet service pays \$22 per month for a basic TV channels package and \$10 per month as rent for required equipment (set-top box). His or her total cost for basic TV service in two years is \$768. By adopting the iTV, their savings will be between \$418 and \$518. The economic value may be even higher than \$518 because the requirement to purchase a Telus phone line

with the Telus TV service can be avoided with online TV. In addition, value can be seen in access to the large number of free online TV channels.

Table 2.3: Telus Consumer Cost Analysis

Telus TV (IPTV) Consumer Analysis	
Monthly Basic Channels Charges	\$22
Equipment Monthly Rent	\$10
Charges for 2 years	\$768
iTV Cost	\$150-\$250
Economic Value	\$418-\$518

2.9.4 Scenario 4: Satellite TV Adopter

A consumer who plans to install a satellite receiver to access free to air channels may be satisfied by the channels available on the web. The cost of a satellite receiver, dish and installation is around \$350. A customer who already has DSL Internet access at home will save \$100-\$200 by adopting our product. The value will be much higher if there are constraints on the dish installation since dish installation is not permitted or is not technically feasible in some locations.

3 DATA ACQUISITION AND DEMAND ESTIMATION

We already identified and introduced in the previous section the different factors that influence demand. The analysis of these factors will be used as a guide or initiator for developing research questions. In this section, we will present the research questions that will be required to get a close demand estimate. To answer these questions, we will rely on primary and secondary research. The input for primary research will be mainly from a consumer survey while secondary research will rely on Canadian statistics and publications pertaining to telecommunications and related industries.

3.1 Research Questions

In the previous part, we identified our beachhead market as “online TV adopters.” There is some behaviour variation between different consumers in this segment. Some consumers are currently viewing online content on the TV while others are using the computer for this purpose. We need to know the portion of this target segment that actually needs our product because a consumer who prefers to view online content while working on his computer will not benefit from our product. By surveying a sample of consumers who are current adopters of online TV, we will be able to find an estimate for the adoption rate by this segment. The product will be described to the respondent and they will be asked through a rating scale question about their willingness to buy it.

How do you describe your willingness to buy this product?

Since the product's price is currently not set, we presented the product as being priced at \$250 – the higher end of the expected price range. Another question will ask the user about his willingness to buy the product at \$150, which will be useful for price elasticity analysis. However, the demand estimation will be based on the response to the first question. A respondent whose answer to the first question (How do you describe your willingness to buy this product at \$250?) shows a high rating will be considered a potential buyer but not an actual buyer due to the limitation of this question; a stated willingness to pay can be different from actually paying. To overcome this limitation, other questions about spending on technological products in the previous year and about the importance of different product attributes will be required. Such questions will allow us to extract the actual buyers from our sample. For spending on technological products, the following questions will be asked:

What is the approximate total amount you spent on consumer electronics products within the last year?

For the attributes importance question, the respondent will be asked to rate the importance of the following attributes for a product that allows access to online TV through the TV set:

- Price (Range \$200-\$300)
- Quality of Image
- Recognized Brand Name
- Warranty Service

- Ability to browse channels while sitting on your couch
- Customized onscreen menu for selecting channels
- Low space requirement for additional hardware next to the TV
- Capability of viewing online TV or Video on Demand content on the TV
- Capability of viewing any recorded computer content on the TV
- Capability of browsing the web through the TV
- Capability of viewing online video content like YouTube through the TV
- Ability to use my PC for other purposes while content is displayed on the TV
- Technical Superiority

A comparison between the iTV score and a substituting product score will be done using the respondent's general ratings of different attributes and our judgement on the iTV score and that of its indirect substitutes. Based on that, we can decide if we can keep this respondent on the potential buyers list or not. Another benefit from the attributes importance question is the ability to see the strength of the iTV through the eyes of the consumer. This can be seen by looking at the ratings of attributes on which competitors' products are weak. If the consumer considers these attributes as important then this is a potential indicator of our product's strength.

After deducing the potential buyers from our sample, we will also need to extract those who are likely to be early adopters in order to have a rough figure of the demand in

the first year. We will try to identify the characteristics of the respondent: i.e. innovator, visionary, pragmatist etc... by their responses to the following questions:

- A direct question that helps to identify the respondent's own perception of their adopter category:

How would you describe yourself as a purchaser of new consumer electronics products? (Different answers will relate directly to the purchasing habits of innovators, visionaries, pragmatists, skeptics and laggards)

- *Please select the technology product(s) that you own* (A list of the latest consumer electronics products will be provided but the respondent will be allowed to add other products).

- *If you purchased any of the items above in the last year, how did you look for information before making the purchase?*

- *Which of the following would most influence you when deciding to buy a consumer electronics product?*

- *Where would you expect to buy the iTV?*

The last question will also be useful for the marketing plan, since it will give some insight about the appropriate distribution channels. We will also add a direct question that helps to identify the characteristic of the respondent.

The major output from this analysis will be a percentage of potential early buyers from adopters of online TV. Secondary research will be used to get an estimate of the

total number of household online TV adopters in Canada. By multiplying the percentage we will get from our sample by the total adopters of online TV, we will get the demand from our beachhead segment. However, we still expect some demand from other segments. So, data will be collected from the non-adopters of online TV segment and it will undergo the same analysis. Additional questions are needed to deduce potential buyers from this segment. A respondent who is highly willing to buy the product can be tested with these extra questions.

What would be your main reason for buying the product?

What type of Internet service do you have at home?

A respondent who has nonexistent or insufficient Internet service at home can't be considered a potential iTV buyer. Another respondent who is already subscribed to a DSL Internet service and whose main reason to buy the iTV is to view special online content that is only available online may be considered a potential buyer.

Other questions will be used for classification purposes and to confirm that there is no significant bias in our sample i.e. Gender, ethnic background, area of study or work, and age.

What is your Gender?

What is your ethnic group?

Apart from the consumer survey, some other secondary research data will be required. Following are some question whose answers will be required:

What is the total number of Canadian households?

What is the total number of DSL Internet household subscribers?

What is the total number of households who are subscribed for each of the different types of TV service (cable, satellite, IPTV)?

What is the total number of households who use the Internet for accessing video or TV content?

What is the total number of households who are not subscribed to any type of TV service (cable, satellite, IPTV)?

The last question can be answered by subtracting the total TV household subscribers from the total number of households in Canada.

3.2 Available Data

We researched published information to get some figures that will provide a better insight for the market in which the iTV will be competing. With Canada being the beachhead geographic market, the estimated total number of Canadian households is one requirement. Following that the estimated number of consumers of different types of TV services will further segment the potential market. Also, the complementary nature of iTV to DSL Internet service and online TV service provides an estimate for the total households subscribed to DSL services as the potential for the total home users of online TV. We will use interpolation, trending and conservative assumptions to get estimates for the required figures for year 2008.

3.2.1 Canadian Households

To get the total number of households in 2008, we researched the census report that is released every 5 years. Table 3.1 show the total Canadian households for years 1996, 2001 and 2006. Estimates for years 1996 and 2001 are based on the final census report. However, the report for 2006 was not released at the time of this study and we used an estimate that is based on the total forms sent to households.

Table 3.1: Total Canadian Households

Year	1996	2001	2006
Household Total	10.82 million	11.56 million	12.7 million

Source: Canada Census Data

Based on this table, there was a 6.9% increase from 1996 and 2001 and a 9.8% increase between 2001 and 2006. We think that by assuming a 6.9% increase for the period from 2006 and 2011, we will be using a conservative estimate for total households. By extrapolating this percentage for another 2 years, we get an increase of 1.38% from 2006 to 2008 and this will result in a total of 12.9 million households.

3.2.2 TV Service Subscribers

To get estimates for TV service subscribers, we need to focus our search on three different areas:

- IPTV
- Cable TV
- Satellite TV

We were able to find a forecast for IPTV subscribers in 2008 in some published articles. The number of IPTV subscribers that is estimated for 2008 is 1.4 million.²² Although the quality of this estimate is not perfect due to the nature of this technology as a new service, we don't expect it to have major implications on our demand estimation. Knowing that the IPTV service is expected to cannibalize sales from the cable TV service, the total TV subscribers won't be affected by the imperfect quality of this estimate. We will subtract this estimate from the normal estimate of cable TV subscribers.

For cable TV subscribers, we found data for years 2001 to 2004 in Statistics Canada publications. Table 3.2 shows the total number of cable TV subscribers from year 2001 to 2005.

Table 3.2: Cable TV Subscribers 2001-2004

Year	2001	2002	2003	2004
Cable TV Subscribers	7,800,000	7,600,000	7,600,000	7,600,000

Source: Statistics Canada (<http://www.crtc.gc.ca/eng/publications/reports/radio/cmri.htm>)

Estimates for year 2005 were found in other sources. The total number of cable TV subscribers was about 7.5 million in 2005²³ and we observed no special trends from 2001 to 2005. In normal market conditions, we would assume that the total cable TV subscribers would be approximately 7.5 million in 2008 and this is the same as the total in 2005. However, IPTV service is expected to cannibalize sales from the cable TV

²² Jeff Leiper, "The battle for Internet TV," *Marketing* (2006), <http://www.proquest.com/>.

²³ "Loading up the Cable," *Shareowner* (2006), <http://www.proquest.com/>.

service. With 1.4 million IPTV subscribers estimated for 2008,²⁴ we can approximate the cable subscribers in the same year to be the difference between 7.5 million and 1.4 million, which is 6.1 million.

For satellite subscribers between 2001 and 2004, table 3.3 was sourced from statistics Canada.

Table 3.3: Total Satellite Subscribers 2001-2004

Year	2001	2002	2003	2004
Satellite Subscribers	1,600,000	2,000,000	2,200,000	2,300,000

Source: Statistics Canada (<http://www.crtc.gc.ca/eng/publications/reports/radio/cmri.htm>)

Other sources were used to get the total number of satellite subscribers in 2005. Bell Express Vu, one of the only two satellite service providers, has about 1.7 million subscribers.²⁵ StarChoice, the other provider, has about 900,000 subscribers.²⁶ This gives a total of 2.6 million satellite subscribers for 2005. It seems that there is a clear trend between 2001 and 2005 for satellite subscribers. Applying these numbers leads to the following simple linear extrapolation:

$S = 1450000 + 230000 * t$, where $t=1$ refers to year 2001 and S is the total number of satellite subscribers.

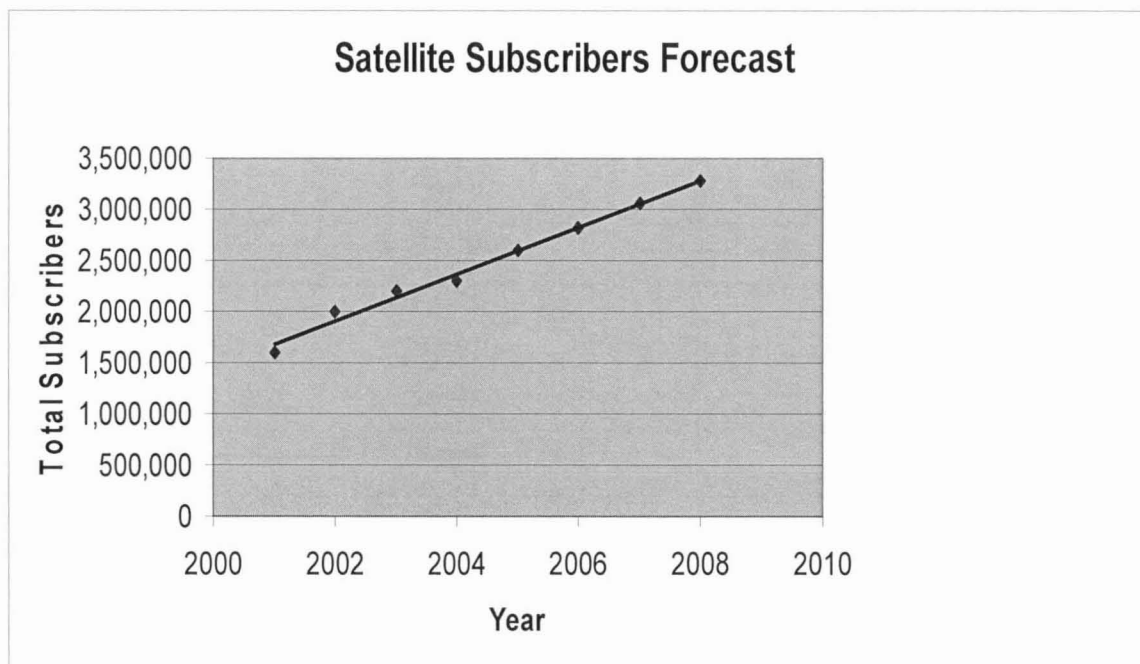
By extending this projection out to year 2008 gives a forecast total of 3,290,000 satellite subscribers. Figure 3.1 shows the plot for the actual and forecast values between 2001 and 2008.

²⁴ Jeff Leiper, "The battle for Internet TV," *Marketing* (2006), <http://www.proquest.com/>.

²⁵ Anonymous Shareowner, "Loading Up the Cable," 2006.

²⁶ Anonymous Shareowner, "Industry Study – Company Profiles," 2006.

Figure 3.1: Satellite Subscribers Trend Line



To show the statistical fit for this trend line we compared in table 3.4 the actual and the trend line estimates for years 2001 to 2005. The maximum difference was 5%.

Table 3.4: Statistical Fit for Satellite Subscribers Trend Line

Year	Actual	Estimate	Difference
2001	1,600,000	1680000	5.0%
2002	2,000,000	1910000	-4.5%
2003	2,200,000	2140000	-2.7%
2004	2,300,000	2370000	3.0%
2005	2,600,000	2600000	0.0%

In summary, we forecast the following estimates for the number of subscribers in three different TV services for year 2008:

IPTV-----	1.4 million
Cable TV-----	6.1 million
Satellite-----	3.29 million
Total-----	10.79 million

By subtracting this total from the total number of households in the same year, we forecast a total of about 2 million households who will not be subscribed to any of the above TV services. Although we expect that the majority of these 2 million households will not be adopters of online TV, we think that our product may offer an economical TV option for this segment if they receive an Internet signal. In addition, they may be motivated in the future to consider the online TV service as their home TV service even if they are not being targeted by Varietize.

3.2.3 DSL Internet Household Subscribers

Canada is one of the top countries in terms of household DSL Internet penetration and in terms of lowest DSL Internet pricing.²⁷ To get an estimate of DSL Internet household subscribers for 2008, we researched Statistics Canada and other reports. Table 3.5 lists estimates from 2002 to 2005. In the second quarter of 2006, the number of high

²⁷ Danny Bradbury, "Bridging Canada's Digital Divide Around the World: Can the Country Manage to Bring its Remote Populations Online? Danny Bradbury reports: [Surveys Edition]," *Financial Times* (2006), <http://www.proquest.com/> (accessed March 3, 2007).

speed Internet subscribers was 7.2 million.²⁸ This represents 61% of total households in the same year based on the households estimate mentioned previously in sub-section 3.2.1.

Table 3.5: Total Canadian Household Subscribers to DSL Internet 2002-2005

Year	2002	2003	2004	2005
DSL Internet Subscribers	4 million ²⁹	4.4 million ³⁰	5 million ³¹	6.7 million ³²

There was a 34% increase between 2004 and 2005 while the increase for the first 6 months of 2006 was only 7.5%. If we add another conservative 2.5% for the next 6 months of 2006, then we end up with a 10% increase for the whole year. This is comparable to the increase that happened in 2003 and 2004. Note that the sharp increase in 2005 was exceptional and cannot be used as a base for estimation for 2007 and 2008. Also, by assuming a conservative 5% increase for 2007 and 2008, we can calculate the estimated DSL Internet subscribers for 2008 as follows:

2005-----6.7 million (from table 3.5)

2006-----7.37 million (10% increase on 2005)

2008-----8.13 million (5% increase on 2006 and 2007)

²⁸ Steve Yang, Lawrence Surteed and Tony Olver, “Canadian Broadband Internet Access 2006-2010 Forecast Analysis: Moving Up,” <http://www.idc.com/getdoc.jsp?containerId=CA7TM6>.

²⁹ Statistics Canada.

³⁰ Ibid.

³¹ Internet Worlds Stats: Usage and Population Statistics, “Broadband and Consumer E-Commerce in Canada Dec 2004 Review,” <http://www.Internetworldstats.com/am/ca.htm>.

³² Information and Communication Policy, “OECD Broadband Statistics, December 2005,” http://www.oecd.org/document/39/0,2340,en_2649_34223_36459431_1_1_1_1,00.html

3.2.4 Online TV Home Users

Recent estimates for the number of online TV home users in Canada are not available. However, we found some specific information about a number of Internet TV providers. JumpTV, a Canadian Internet TV provider, currently has 30,000 subscribers and is expected to reach 500,000 by the end of 2008.³³ In addition, CBS streamed online the NCAA basketball tournament and reported 268,000 viewers on average on the first day of the tournament.³⁴ This data is recent but it does not reflect the actual adoption in Canada. However, data from earlier years can be used for rough estimation. Statistics Canada conducted a survey in 2004 that was related to Internet use by Canadian households.³⁵ One finding from this survey that is important to our study is that 12% of Canadian home Internet users accessed the Internet to download or watch a movie or TV program. Our beachhead segment matches this category except for the portion that downloaded movies; the iTV will not support this functionality in the early stages. Since we were not able to get an accurate estimate for online TV and video users, we will split the 12% estimate to three equal portions that cover the three tasks: downloading movies, watching online video and watching online TV. By this, we can assume that **8%** of household Internet users use the Internet to view online TV or video. We know that this assumption may not reflect the actual percentage of users who do so, since we only have aggregate data from Statistics Canada (Where the majority of the users surveyed could be using the Internet for downloading movies and only a small portion could be using it for

³³ Jessica Bennett, "Taking TV to The Internet; Scott Paterson: The CEO is aiming JumpTV at immigrants who want to watch ethnic programming: [International Edition]," *Newsweek* (2006), <http://www.proquest.com/>.

³⁴ Grant Robertson, "Watching videos at work? Who's watching you?" *The Globe and Mail* (2006), <http://www.proquest.com/>.

³⁵ Statistics Canada 2004, "Household Internet Use Survey," <http://www.statcan.ca/Daily/English/040708/d040708a.htm>.

viewing online TV or video). However, our knowledge of the habits of online TV adopters gives us some confidence that this “8%” is a rational assumption. Despite this confidence, we are not using this estimate as the only basis for demand estimation, for data from our own survey results will also be used to support this assumption. In addition, future releases of iTV will support functionality for downloading movies, which reduces the limitations of using this estimate.

Multiplying the total number of DSL Internet subscribers in 2008 that was calculated in sub-section 3.2.3 by the assumed estimate (8%) will result in more than 650,000 households who will be adopting online TV/Video. Note that we have considered only DSL Internet subscribers as they are the ones who have the interest and willingness to pay for high speed access required for viewing video content. We will try to get a better and recent estimate using the consumer survey data in the next sub-section.

3.3 Consumer Survey

The consumer survey was conducted to achieve a close demand estimate as well as to get sufficient feedback from the consumer. This was expected to provide valuable feedback for the marketing plan. The work on the survey was divided into two parts: “questionnaire preparation” and “data collection and analysis.”

3.3.1 Questionnaire Preparation

Zaltman and Burger list five steps in the process of questionnaire preparation:³⁶

- Deciding on the necessary information.
- Deciding on the type of questions.
- Deciding on the number of questions required and the question order.
- Writing the first draft.
- Questionnaire revision.

The first three steps were already covered in sub-section 3.1 except for the question order. The order of questions was planned in a way that allowed a good flow, especially for respondents who are considered to be unfamiliar with online TV or with current products related to this service. The first part of the questionnaire included general information and questions about current products and habits related to Internet TV/Video while the second part addressed specific information and questions about the iTV. The questionnaire ends with a background section. The question order was modified through feedback from the supervisors of this study. Then, five respondents who represent online TV adopters as well as non-adopters were selected for testing. Feedback from this group was used to modify questions that were difficult to communicate or included any terms with multiple interpretations. Appendix 4 includes the questionnaire questions in the same order as they were presented online.

³⁶ Gerald Zaltman and Philip C. Burger, *Marketing Research: Fundamentals and Dynamics*, (Illinois: The Dryden Press, 1975), 256.

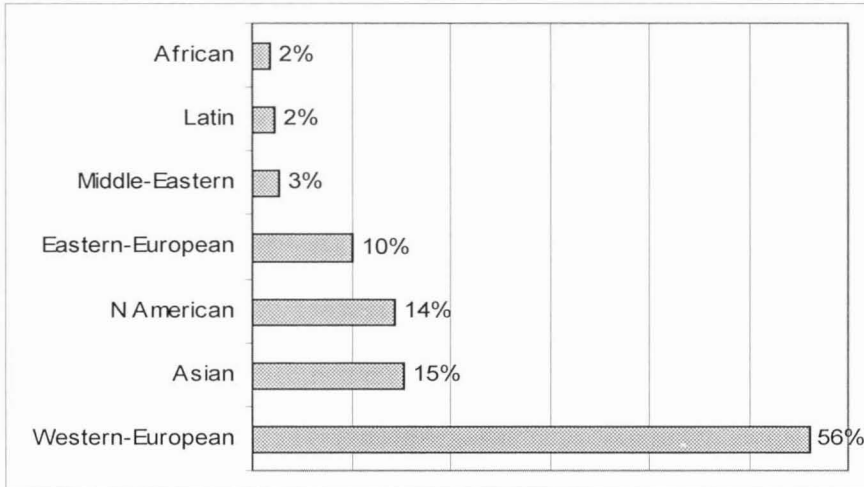
3.3.2 Data Collection and Analysis

The questionnaire was posted on the SFU web-survey server and only SFU users were allowed access to it. Specific SFU user groups were invited to fill out the survey form by sending the survey link to their emails. Two mail-lists were selected for this purpose: the all-grads list that included all graduate students at SFU and the cupe3338-forum list that included the majority of SFU members of the Canadian Union for Public Employees (CUPE). The two groups provided diverse respondent characteristics in terms of ethnicity, income, spending on consumer electronics, gender and awareness level of Internet TV. The survey was accessible for 10 days and it received 230 responses. For analysis, respondents were split into different categories that represented different consumer segments.

3.3.2.1 Respondents Characteristics

To be confident that our surveyed sample was not biased, we analyzed the diversity of respondents. As a first observation, 47% of respondents were males and 53% were females. Respondents also represented a diverse ethnicity as shown in figure 3.2. Some respondents provided more than one ethnic background, as evident when adding the total percentages of all ethnicities in the figure.

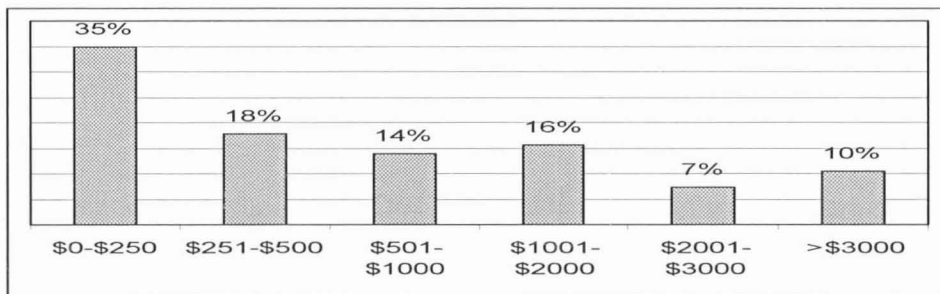
Figure 3.2: Ethnicity Distribution among Respondents



Source: Survey Data

Another important observation is the total spending on consumer electronics products for the last year, which is shown in figure 3.3. This information will be used later to analyze individual respondents for the purpose of demand estimation.

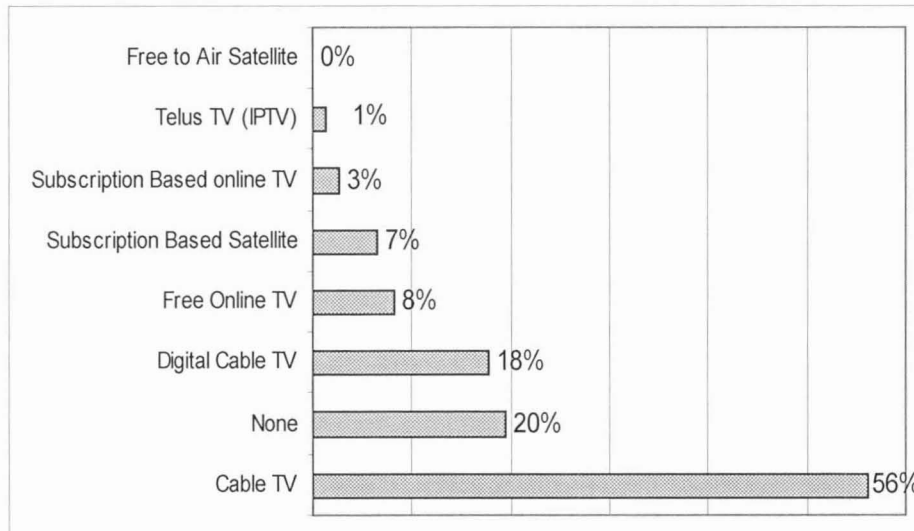
Figure 3.3: Respondents Total Last Year Spending on Consumer Electronics Products



Source: Survey Data

We also classified in figure 3.4 the respondents based on the TV service at their home. We observed that a big portion of respondents are cable TV subscribers, which is similar to what we have found in sub-section 3.2.2 in the Statistics Canada data.

Figure 3.4: TV Service Available at Respondent's Home



Source: Survey Data

3.3.2.2 Clustering the Surveyed Sample

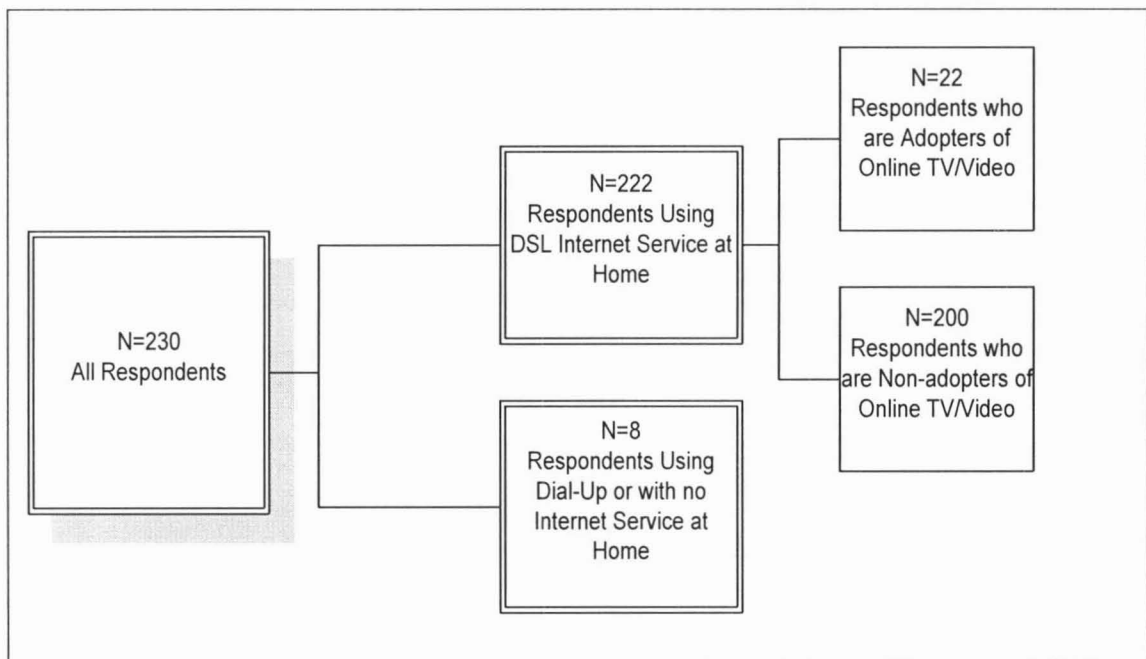
Segmenting non-homogeneous groups permits the identification of segment specific behaviours.³⁷ Segmentation permits analysis of smaller samples based on specific characteristics. For the purpose of our analysis, two main consumer characteristics are important: “DSL Internet service subscriber” and “online TV adopter.” Three final groups resulted from this clustering:

- Respondents who have a DSL Internet service and are adopters of online TV.
- Respondents who have a DSL Internet service and are non-adopters of online TV.
- Respondents who are not subscribed to a DSL Internet service i.e. subscribed to dial-up or not subscribed to any Internet service.

³⁷ Gerald Zaltman and Philip C. Burger, *Marketing Research: Fundamentals and Dynamics*, (Illinois: The Dryden Press, 1975), 509.

The first group is our beachhead segment, from which most of the iTV demand is expected to originate. Some demand is also expected from consumers in the second group, especially those who start considering online TV as another option for TV services. Later, we will estimate demand from consumers of the first two groups. Consumers of the third group cannot benefit from our product with their current Internet service and it is not useful to consider adoption by them.

Figure 3.5: Clustering Respondents Based on the Required Characteristics

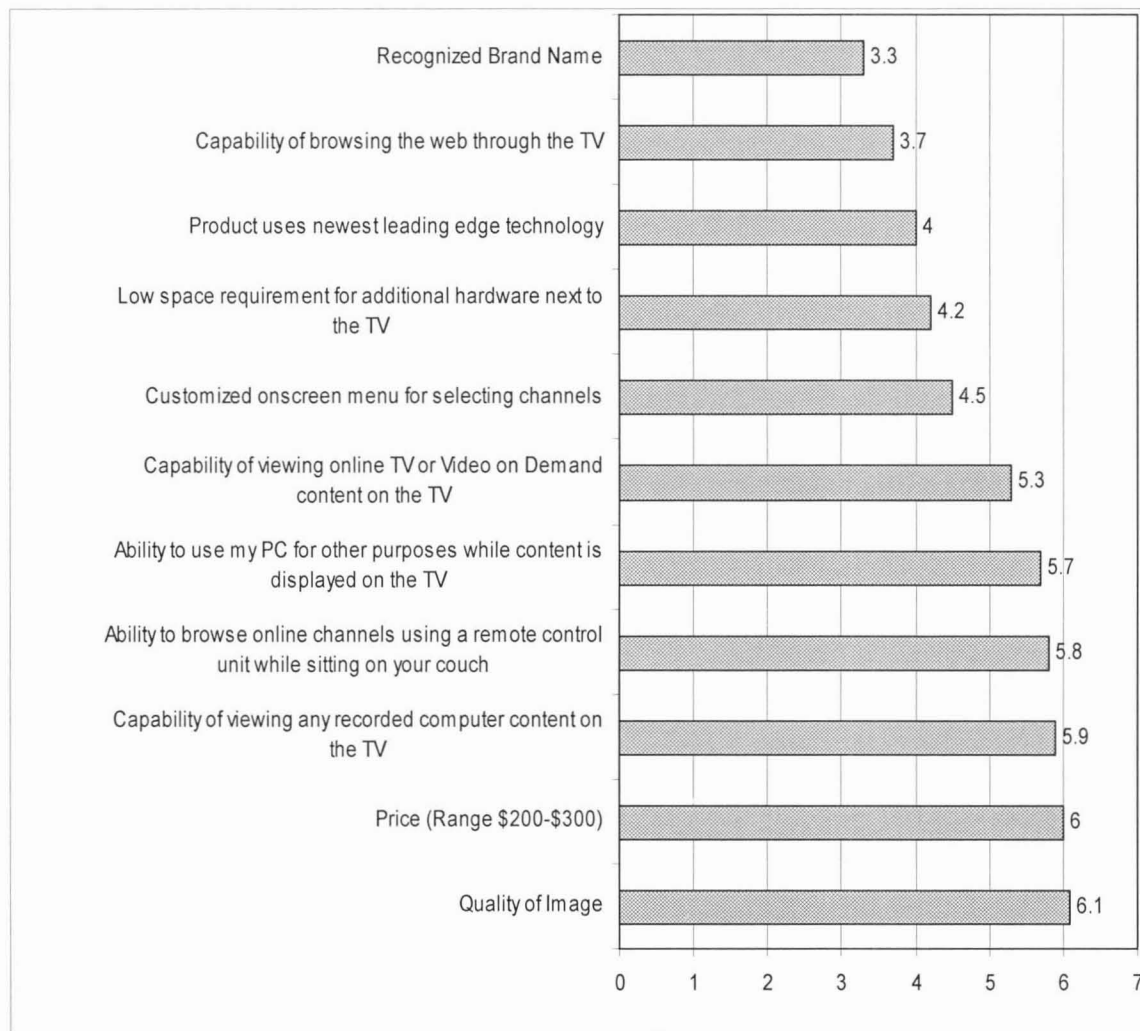


3.3.2.3 Online TV Adopters: Analysis and Demand

A total of 22 respondents reported being users of online TV service at their home. This is the sample that is assumed to be representing our beachhead segment and we will start with the characteristics of this sample. Note that respondents were allowed to select more than one answer, which will mean that reported percentages on different charts will

exceed 100%. Figure 3.6 shows the average importance rating of product attributes based on this smaller sample.

Figure 3.6: Attribute Importance by Online TV/Video Adopters for iTV and substituting products

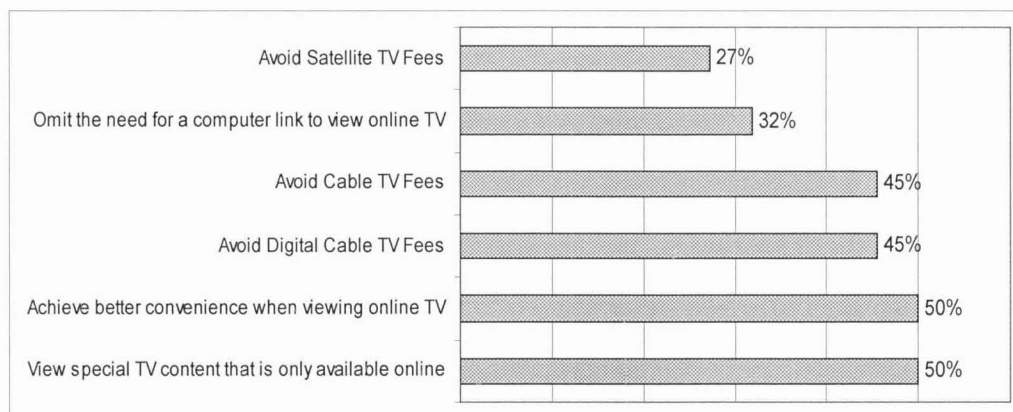


Source: Survey Data (1=Not Important, 7=Very Important)

We can see from this figure that the quality of image has the highest importance. This is an advantage for the iTV since it overcomes a significant number of indirect substitute products when evaluated based on this attribute. As for price and the capability of viewing recorded content, we realize there is an issue here because indirect substitute

products dominate the iTV on these two attributes that are highly rated by our beachhead market. Viewing recorded content through the iTV has some limitations because it requires an external memory drive and also because recording through the iTV is only possible for streamed content. However, the ability to browse channels using a remote control unit and the ability to use the computer for other purposes while viewing online TV content have a very close rating to the two previous attributes, which will provide some defence for the higher price since no current product other than the iTV is capable of providing these two features. Also, the ability to record online TV content is a feature that should be highly considered in future software releases. Finally, it is good to note that the lowest rated attributes are the attributes where the iTV has a low score. This means that weaknesses on these attributes should not create major issues for the iTV.

Figure 3.7: Motivation to Buy the iTV by Current Online TV Adopters

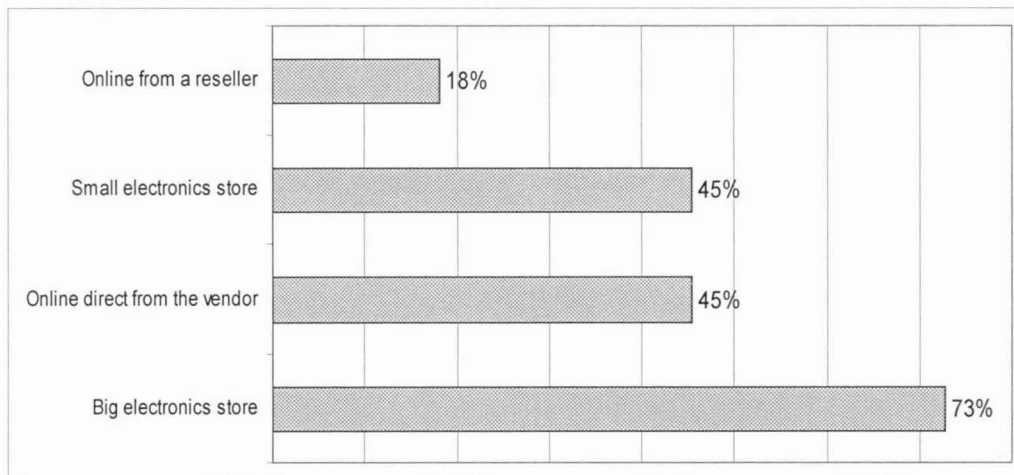


Source: Survey Data

When respondents were asked to mention the main reasons for buying the iTV, convenience was one of the top motives. This is a feature on which iTV positioning should be based. In addition, respondents reported a strong preference for big electronics

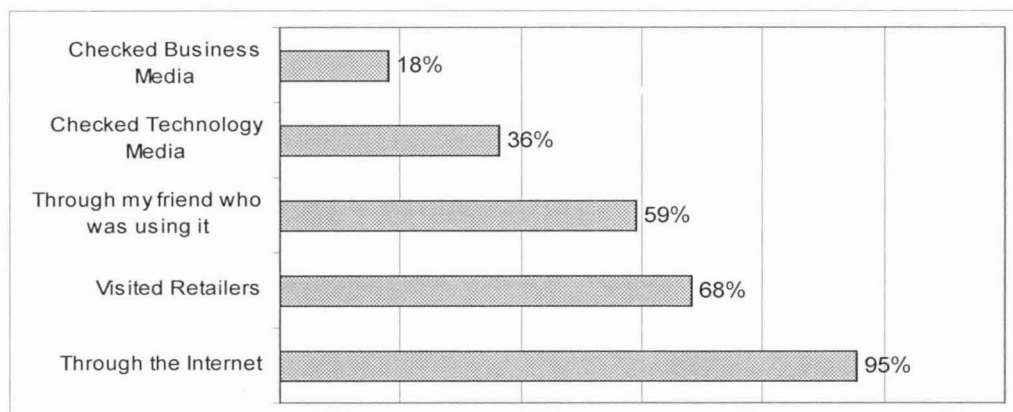
stores as the location from which they expect to buy the iTV. In addition, buying online from the vendor was preferred above buying online from a reseller. As for the source of information before buying a consumer electronics product, the majority of respondents selected the Internet as their source.

Figure 3.8: Buying Location Preference by Online TV Adopters



Source: Survey Data

Figure 3.9: Source of Information by Online TV Adopters



Source: Survey Data

Finally, we classified respondents based on their characteristics as buyers of new technologies. This classification is required for estimating demand from our sample, since we will only consider early adopters i.e. innovators and visionaries. Our decision concerning the respondent's classification was done by analyzing the answers for the following questions:

- What is the approximate total amount you spent on consumer electronics products within the last year?

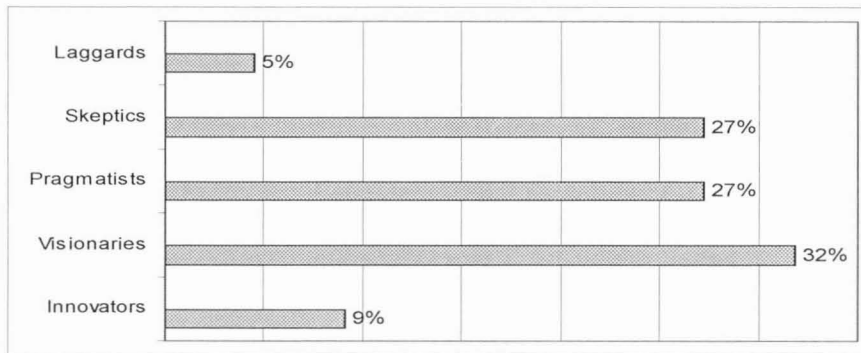
- How would you describe yourself as a purchaser of new consumer electronics products?

- Which of the following would most influence you when deciding to buy a consumer electronics product?

- Please select the technology product(s) that you own.

For example, consumers with low spending on consumer electronics products and who do not own any of the products listed in the last question will not be considered early adopters even if their answers to the second and third questions classify them as early adopters. So the responses to the first and last questions were used to validate the classification of early adopters that was achieved through the second and third questions.

Figure 3.10: Buyer Classification of Online TV Adopters



Source: Survey Data

It was surprising to see many skeptics and laggards within online TV adopters. One explanation for this could be the search for a cheap TV service. In order to get a better insight, we created a cross table for the five adopter categories vs. the available TV services for online TV adopters (table 3.6). Note that laggards are adopters of only free online TV service, which matches with our previous explanation. However, the data for skeptics is not matching and this may be due to the limitations of our sample.

Table 3.6: TV Service Used by Different Adopter Categories for Online TV Adopters

TV Service	Adopter Category				
	Innovator	Visionary	Pragmatist	Skeptic	Laggard
Cable TV	5%	7%	7%	7%	0%
Digital Cable	0%	7%	5%	5%	0%
Free Online	0%	16%	14%	11%	2%
Satellite	0%	2%	0%	0%	0%
Subscription Online	5%	5%	2%	2%	0%

Source: Survey Data

We also explored the willingness to buy the iTV by different adopter categories within adopters of online TV. Table 3.7 summarizes these findings.

Table 3.7: Willingness to Buy the iTV of Different Adopter Categories for Online TV Adopters

Adopter Category	Willingness to Buy the iTV for \$250 (Rates 5 to 7)			Grand Total
	Rate : 5	Rate: 6	Rate: 7	
Innovator	0%	5%	0%	5%
Visionary	11%	11%	7%	30%
Pragmatist	11%	0%	0%	11%
Skeptic	7%	0%	7%	14%
Grand Total	30%	16%	14%	59%

Source: Survey Data

If we can consider that the expected early adopters are respondents whose ratings for their “willingness to buy” is higher than 5 and who are in the innovator and visionary category, then we can say that 23% from our beachhead segment will be early adopters. This is the sum of the highlighted cells in table 3.7. However, due to the limitations of the willingness to buy question, we can’t base our demand estimate only on this table. So, we will use further analysis to extract the actual early adopters from this table.

As mentioned previously, a total of 22 respondents reported using online TV service at their home and these represent 9.5% of all respondents. We previously concluded in sub-section 3.2.4 from secondary data sources that 8% of household Internet users used the Internet to view online TV/Video. To compare this value with our data, we needed to remove the portion of our total respondents who did not have an Internet service at home. With only 2 respondents reporting that they have no Internet service at home, we found that 9.6% of Internet users in our sample were using the Internet to view online TV/video. Again this was a close estimate to the 8% that was assumed for 2004, which provides some validation for our survey estimate.

In sub-section 3.2.3, we forecast a total of **8.13 million** DSL Internet household subscribers for 2008. To estimate the total number of household adopters of online

TV/Video, we calculated the percentage of online TV/Video adopters from DSL Internet subscribers in our sample, which was **10%** since it excludes the dial-up subscribers from the previous 9.6% calculation. Based on that, we forecasted a total of **813,000** households who will be adopters of online TV/Video in 2008. This is the size of our beachhead segment.

Table 3.8: Calculation of Household Internet TV Adopters for 2008

Total DSL Subscribers In Canada	8.13 million
Total DSL Subscribers within All Respondents	222
Total Adopters of Online TV within All Respondents	22
Percentage of Online TV Adopters within DSL Subscribers	10%*
Estimated Number of Household Internet TV Users in Canada	813,000

** This percentage was calculated based on the survey data after dividing the number adopters of online TV (22) by the number of DSL subscribers (222).*

Our next step is to calculate the early demand for our product from this segment. To get an estimate of the demand for iTV from our beachhead segment, we analyzed the responses from the 22 respondents who represented this segment. First, we excluded from this segment all respondents who are expected to be late adopters, since we are estimating demand for the first year. Then we looked at “the willingness to buy our product at \$250” and we excluded all those whose rating was less than 6. We ended up with a list of potential early adopters.

Table 3.9: Weighted Scores for the iTV and AverMedia's Product

Attribute	Respondent's Rate	"iTV"		AverMedia	
		"iTV" Score	"iTV" Total Score	AverMedia Score	Avermedia Total Score
Price (Range \$200-\$300)	7	4	28	7	49
Recognized Brand Name	6	4	24	7	42
Low space requirement for additional hardware next to the TV	1	7	7	5	5
Capability of viewing any recorded computer content on the TV	5	2	10	7	35
Capability of browsing the web through the TV	2	0	0	7	14
Ability to use my PC for other purposes while content is displayed on the TV	7	7	49	2	14
Product uses newest leading edge technology	6	7	42	4	24
Customized onscreen menu for selecting channels	7	7	49	0	0
Ability to browse online channels using a remote control unit while sitting on your couch	7	7	49	0	0
Weighted Total			258		183

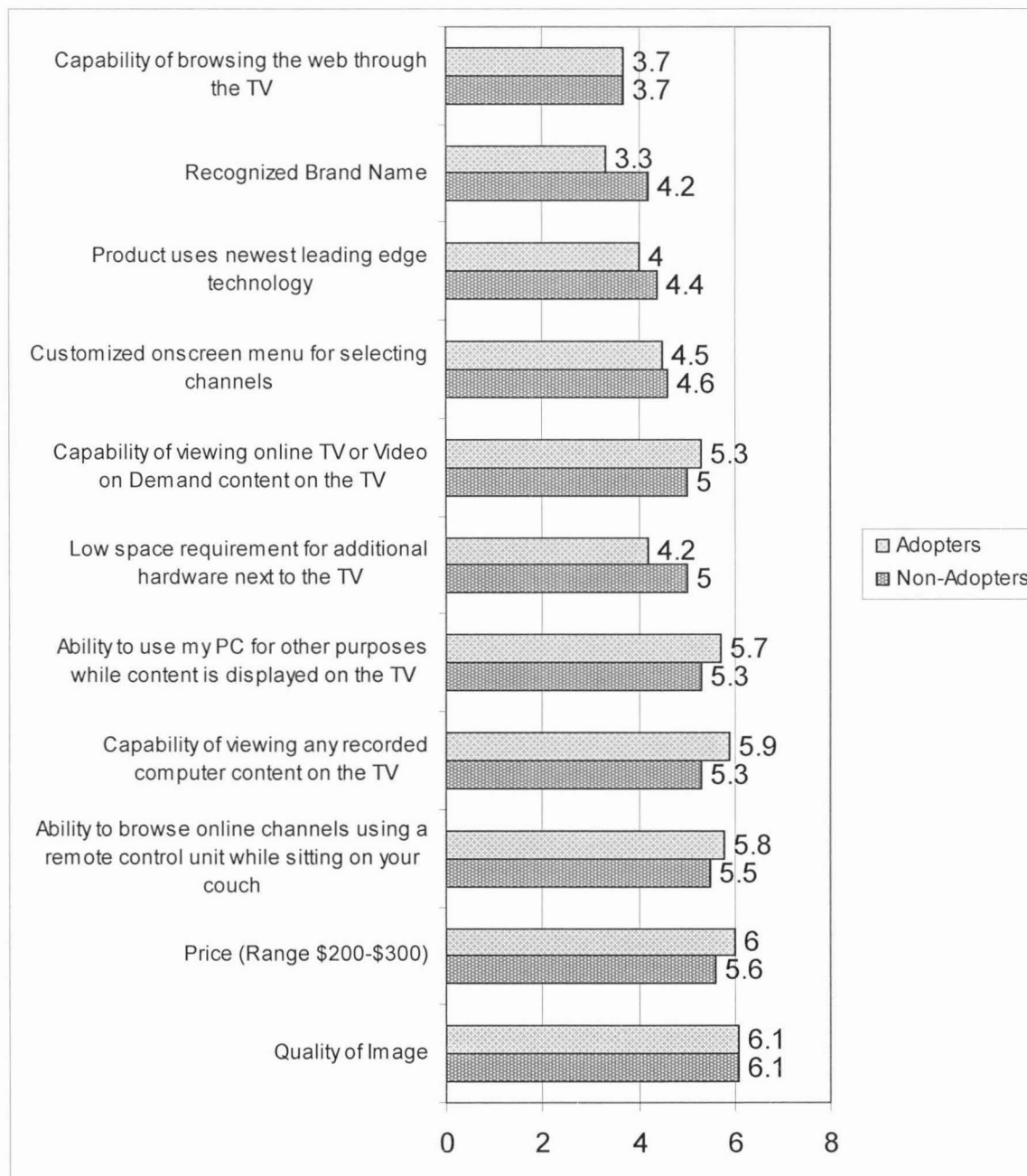
By multiplying the product attribute rate (using the respondent's response to survey Q.3) with the iTV score on these attributes, we were able to calculate a weighted total score for the iTV for each respondent. This score was compared with the score of one of the highest selling indirect substitute products: the QuickPlay PC-TV converter by

AverMedia. If a respondent's score for the iTV exceeds the other product score by at least 20%, then this respondent is considered an expected adopter for our product. We used 20% to eliminate any bias that could have caused a higher weighted score for the iTV. Table 3.8 demonstrates this calculation for one selected potential adopter. Attributes on which the two products score the same were excluded from the calculation since they will not affect the total. Through this calculation, we arrived at the number of respondents who are considered as potential adopters of the iTV. Based on our sample, we found the estimated demand from current online TV adopters is 9%. Multiplying this percentage by the estimated number of online TV adopters (813,000) gives a total demand of approximately **73,000** iTV unit sales that will originate from adopters of online TV/Video.

3.3.2.4 Internet Adopters: Analysis and Demand

A large number of respondents are adopters of DSL Internet service without being adopters of online TV/Video. A total of 200 respondents represented this segment. We realized there was some demand expected from this segment, based on the "willingness to buy" question, which required us to analyze this segment and consider the demand that may originate from it. We first compared the attribute ratings by this segment with of online TV adopter ratings and we were able to see minor differences from the ratings of our beachhead segment.

Figure 3.11: Attribute Ratings by Non-Adopters and Adopters of Online TV/Video

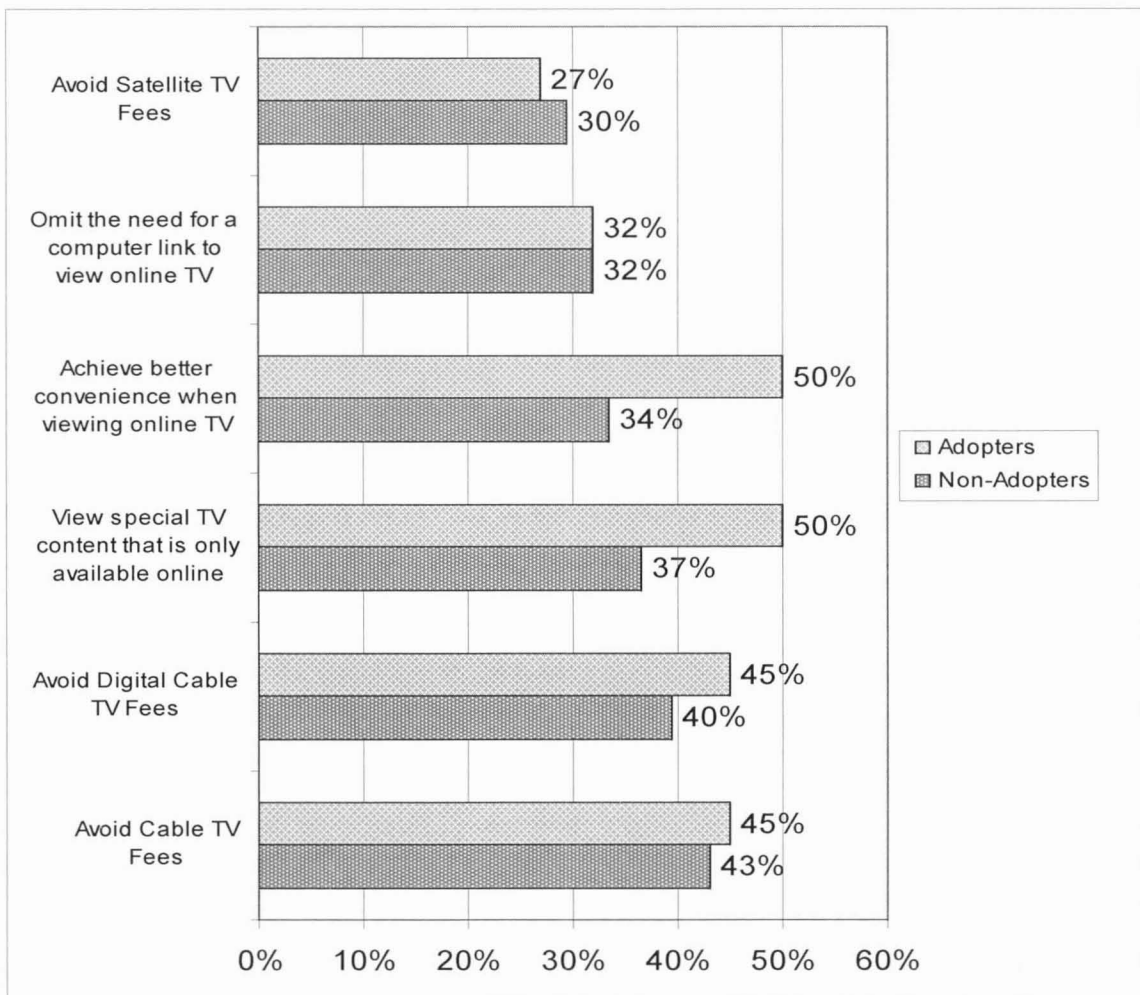


Source: Survey Data (1=Not Important, 7=Very Important)

We also analyzed the reasons that could motivate consumers in this segment to buy the iTV. We noticed that avoiding cable TV fees and digital cable TV fees, in addition to the need to view special TV content that is only available online, are the most

likely reasons. It is logical that these motivations are different from what we observed for our beachhead customers. Since this segment was not an adopter of online TV, the motive for buying our product is similar to the motive for dropping their current service: avoiding extra fees. Previously, we mentioned that our product may motivate current subscribers of other TV services to drop their service and switch to online TV service and this is what we can observe from figure 3.12.

Figure 3.12: Motivation to Buy the iTV by Adopters and Non-Adopters of Online TV



Source: Survey Data

Our next step was to calculate the estimated demand from this segment. We were interested first to analyze the current TV service for respondents who showed high willingness to buy the iTV, knowing that they are non-adopters of online TV. Table 3.10 summarizes these findings. This was not surprising knowing that the cable TV is the TV service with the highest penetration in Canada.

Table 3.10: Current TV Service for non-adopters of online TV with high willingness to buy the iTV

	Willingness To Buy at \$250 (Rate 6 and 7)		
TV Service	Rate: 6	Rate: 7	Grand Total
Cable TV	7%	2%	9%
Digital Cable	5%	1%	5%
Satellite	1%	0%	1%
Grand Total	13%	2%	15%

Source: Survey Data

We also explored the willingness to buy the iTV by different adopter categories within DSL Internet subscribers. Table 3.10 summarizes these findings.

Table 3.11: Willingness to Buy the iTV for Different Adopter Categories within DSL Subscribers

	Willingness To Buy at \$250 (Rate 6 and 7)		
Adopter Category	Rate: 6	Rate: 7	Grand Total
Innovator	1.0%	0%	1.0%
Visionaries	3.5%	0%	3.5%
Pragmatist	5.5%	1.5%	7.0%
Skeptic	1.0%	0%	1.0%
Laggard	1.5%	0.5%	2.0%
Grand Total	12.5%	2.0%	14.5%

Source: Survey Data

If we can consider that the expected early adopters from this segment are respondents whose ratings for their “willingness to buy” is higher than 5 and who are in the innovator and visionary category, then we can say that 4.5% of DSL Internet service subscribers will be early adopters. This is the sum of the highlighted cells in table 3.11. However, due the limitations of the willingness to buy question, we can’t base our demand estimate only on this table. So, we used the same approach that was used for the online TV adopters sample but with higher constraints. We only considered the respondents whose score for the iTV exceeded 35% of that for AverMedia. We used a higher percentage here since we expect a higher bias knowing that the level of awareness of online TV by this segment is expected to be lower than that of our beachhead segment. We concluded that 0.5 % of DSL Internet users who are not adopters of online TV will be early adopters of our product. We estimated previously that the total DSL Internet household subscribers will be 8.13 million. By subtracting 813,000 that are estimated to be online TV adopters from 8.13 million, we get about 7.31 million household Internet subscribers who are also non-adopters of online TV. Applying our 0.5% to that total will give us an additional 36, 000 demanded units from the remaining household DSL Internet subscribers.

3.3.2.5 Total Demand

The iTV total demand for the year 2008 will be approximately **109,000** units. This demand will originate mainly from adopters of online TV/Video. Adopters from this segment will be primarily motivated by the need for improved convenience when viewing online TV. On the other hand, adopters from other segments will be motivated by the need to avoid cable fees knowing that the launch of the iTV will provide them

with an economical TV service. To achieve this demand, we should take the following two facts into consideration:

- This demand is for an ideal scenario in terms of advertising and distribution strategy. The company should consider an aggressive promotion strategy to achieve this sales total.
- Varietize should be able to protect the product copyrights through patents. In case of the emergence of products with comparable features, demand should be adjusted to take into consideration the market share of other players.

3.3.3 Survey Limitations

Since the survey was conducted with a limited budget and time, we expect to have some limitations. Such limitations originate from the method used, sample size and sample characteristics.

- Using an online survey created less control over the questionnaire as compared to an interview. In addition, probe questions that may be useful for a new product were not possible with our survey method.
- It was not clear who submitted the questionnaire form and possibly only those interested in the subject may have responded. This means that respondents who submitted the responses are deciding the sample used.
- Conducting the survey within a limited community would mean that certain segments were not represented in the sample.

- The fact that the product has not been introduced to the market made it hard to determine if respondents understood the product description. Since interaction was not possible, we cannot know if respondents answered the questions with a clear vision of the product.
- Although the total sample size was 230, the portion of this sample that represented our beachhead segment was only 22. This sample may be considered insufficient for drawing conclusions about our beachhead segment.

3.3.4 Demand Estimation Limitations

The demand estimation in this study had some limitations that resulted from the limitations of the data from the consumer survey: limited budget and time.

- Findings from the consumer survey were not surprising and we think they have some accuracy. However, generalizing these findings to the whole population of Canada may have resulted in an inaccurate demand estimate because we have a limitation based on the sample size and the possibility that they are not representative of the whole population.
- It was not possible to ask respondents to score the iTV on different attributes due to their unfamiliarity with the product and due to the unavailability of a sample product for testing. So, we used our judgement when scoring the iTV on different attributes. This may have created some inaccuracy or bias when we compared the iTV's score with one of its indirect substitutes' scores.

- The estimated demand from our sample was based on the answer to the “willingness to buy” question. Since willingness to buy has different interpretations from actually paying to buy a product, this could have caused some bias – although we used additional questions to qualify a respondent as an expected buyer.
- Knowing the period that separates the date of this demand estimate and the year for which it is intended, and given the fast moving environment of the online TV industry and the effect of this movement on the consumer, it is possible that this demand may vary.

4 MARKETING PLAN

Recommendations in this part are mainly based on the previous analysis and on technological innovations and marketing concepts. They represent a guide for the iTV launch and market entry. After analyzing the market, estimating the iTV demand, and exploring different characteristics of our beachhead consumers through the consumer survey that was conducted, we can be assured that we obtained enough data and findings to allow us to move to the recommended marketing plan.

4.1 Situation Analysis

4.1.1 Target Market and Segment

Our beachhead geographic market is “**Canada**” and our beachhead segment is “**Home Users of Online TV/VoD Service.**” There is one main reason for choosing this segment as our beachhead. Consumers in this segment are already familiar with the Internet and the online TV technology and they are not required to undertake a big technological or behavioural change in order to adopt our product. This is an important consideration for innovative products.³⁸ We will explain the current behaviour and needs of different consumers in this segment in order to see the benefits they will achieve by adopting our product. First, a consumer who is using a PC-TV converter should locate their computer and TV set in the same room for a better convenience when changing channels. There are two adoption issues with this scenario: (1) there is a need to attend to

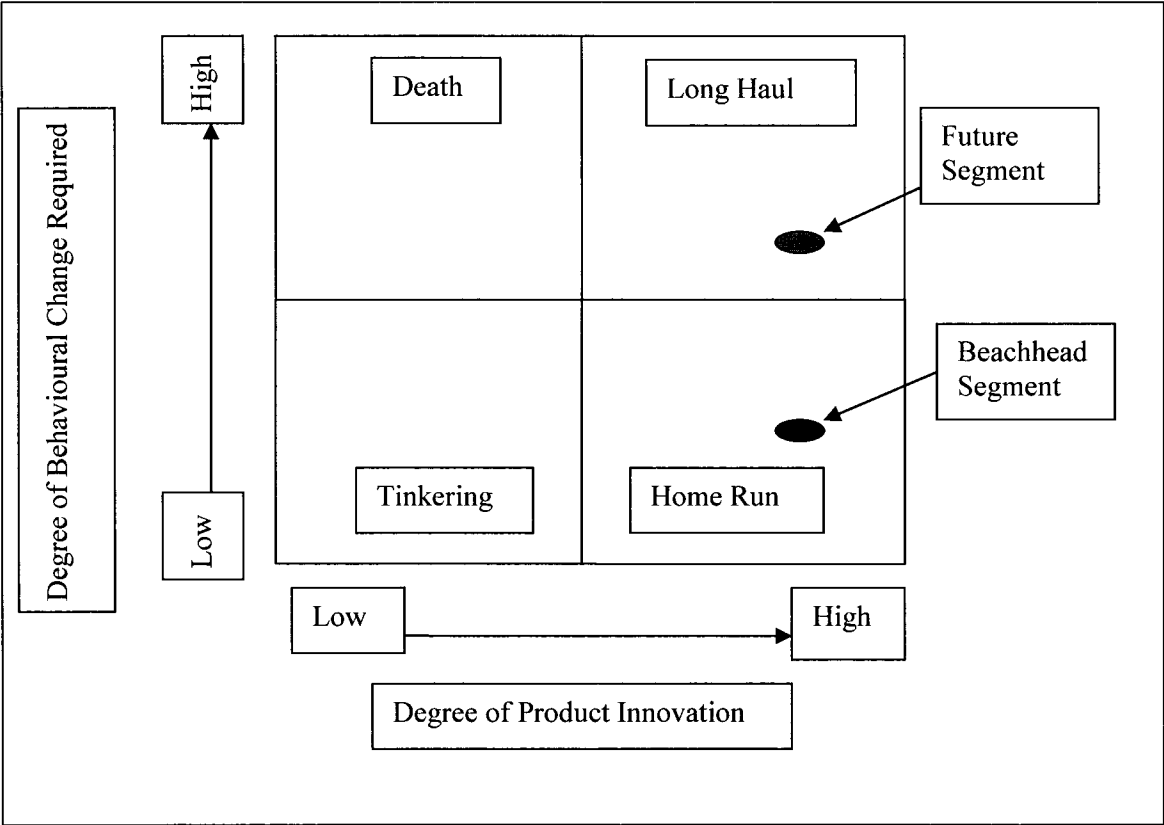
³⁸ John Gourville, “The Curse of Innovation: Why Innovative New Products Fail,” *Marketing Science Institute*, no. 05-004 (2005), 11.

the computer to switch from one channel to another, and (2) the computer cannot be used for other purposes while viewing online TV content. These issues could be solved, but with additional cost and complexity. By locating a wireless keyboard and a wireless mouse next to the viewer, it would be possible to switch from one channel to the other while sitting on the couch. This solution may create other inconveniences due to the size of a keyboard and the space required on the coffee table or couch. For the second issue, an additional video card can be installed in the computer allowing it to produce two different images. This solution may not be feasible for some computers (mainly laptops) due to hardware or software limitations. Similarly, a consumer who is using a video card with TV-out faces the same issues. This consumer also faces an additional issue related to the image quality, for the conversion that was achieved by the PC-TV converter is not possible with this card and the result is lower quality video that is not suitable for a normal TV. Third, a consumer using the computer monitor to view online TV content does not need any extra hardware. There are three adoption issues with this scenario: (1) the viewer should be close to the monitor, which makes it difficult for all household members to watch the content at the same time; (2) image quality is not satisfactory; and (3) the computer cannot be used for other purposes while viewing online TV content.

Other future target customers are households who have Internet at home but are not adopters of online TV and may be unsatisfied with their existing TV services (cable, IPTV, satellite) due to their high cost or their limited offerings. One good reason that prevents us from targeting these customers in the early stage of our product life cycle is their need for a bigger behavioural change. Behavioural changes by these customers include the adoption of Internet TV or the need to upgrade their current Internet service.

A low behavioural change is required by our beachhead customers, but this is not expected to cause adoption issues. These consumers are already using other TV services and they will be changing the way they view online TV to match their behaviour with traditional TV services. Figure 4.1 shows the plotting of the two different segments on Gourville’s matrix.

Figure 4.1: Plotting Varietize Target Segments on Gourville’s Matrix



Source: John Gourville, "The Curse of Innovation: Why Innovative New Products Fail," Marketing Science Institute, no. 05-004 (2005), 15 (author added the market segments)

4.1.2 SWOT (Strengths, Weaknesses, Opportunities and Threats)

4.1.2.1 Strengths

- Patent: Management plans to file a patent application for North America after prototype development is completed. An international patent application will be filed after launching in North America. We think that patent protection would guarantee a barrier to imitation for a period of up to four years. We expect competitors to invent around the product through reverse engineering. A study found that 60% of patented innovations were invented around within 4 years.³⁹ However, reliance won't be on the original product design. We expect to file additional patents to protect product design improvements, which may allow imitation barriers to last for a longer period.

- Technical expertise: The two product developers at Varietize carry a 30 years collective experience in the design of video and telecommunication products. This expertise will be a major asset for the company in its future market competition. In addition, the developers and designers who will join the team in the future will benefit from this expertise to continue innovation at the company.

- Powerful hardware design: The product hardware is designed in a way that allows customization of the iTV to meet additional product features and enhancements. These features and enhancements may be needed by current and future target segments and will be implemented through software upgrades on the same original hardware.

³⁹ Charles W L Hill, "Establishing a Standard: Competitive Strategy and Technological Standards in Winner-Take-All Industries," *The Academy of Management Executive* 11, no. 2 (1997), <http://www.proquest.com/> (accessed February 19, 2007).

4.1.2.2 Weaknesses

- High cost structure: With the small number of manufactured units in the early years, we expect this to cause high manufacturing cost. Even by outsourcing this part of the supply chain, the cost will be based on the volume. In addition, distributors and retailers are expected to request a high margin to add our product to their offerings, considering the higher risks associated with carrying a product that has no demonstrated demand.
- Weakness on some features: Our beachhead consumers provided a high rating for “the ability to view recorded content.” The iTV has some limitations on this feature. In addition, recording through the iTV is only possible for streamed content. Efforts should be made to include a browser in the future versions in order to allow users to download video files.
- Weak brand name: Varietize has no current products in the market that it can rely on for strengthening its brand name.
- Inadequate marketing skills at the company: Company founders have a higher focus on the technical side. Although, they got some business training that mainly deals with incorporation practices, they have no experience in product and business marketing.
- Lack of access to key distributors: Without any existing products in the market, access to distributors would be a real challenge.

4.1.2.3 Opportunities

- Complementary product penetration: Household DSL Internet penetration is very high in Canada.

- Technological changes: The shift to Internet TV has been described as the explosion of Internet video and there are expectations of seeing a disruptive change.⁴⁰

- Complacency: by being the first to move in this strategic direction, we expect to gain a competitive advantage and great momentum in the market by defining the new category and establishing ideal points.

4.1.2.4 Threats

- Complimentary Product Threats: Threats from complimentary products are evaluated based on four criteria. These are direction of dependency, degree of dependency, external complementarities and internal complementarities.⁴¹ All of these apply to our product except the internal complementarities. Sales of our product are dependent on the sales of Internet service, on the sales of TVs and on online TV offerings. There is no concern from Internet service sales. Internet service subscribers have been increasing in recent years⁴² and the trend is expected to continue due to the additional services and applications on the Internet. On the other hand, we have some concerns about complementarities with TV sets that are expected to be cannibalized by the sales of the HDTVs.⁴³ This concern arises from the fact that the first version of our product will not support an HDTV. Moreover, due to the high degree of dependency on the online TV offerings, we are concerned about the future of this service that is still in its initial stage. This threat will be magnified when we relate it to other threats such as regulation and legal trends (see section 1) since it may result in the opposition from Internet service

⁴⁰ Carol Wilson, "Web-based Video Offers More Choice," *Telephony: VOD 2.0* (2006), <http://www.proquest.com/>.

⁴¹ Lindsay Meredith, "Scanning for Market Threats," *Journal of Business and Industrial Marketing* (2007).

⁴² Statistics Canada.

⁴³ Mike De Souza, "Consumers Fuzzy on HDTV: [Final Edition]," *The Gazette* (2006), <http://www.proquest.com/>.

providers against some online TV offerings, which leads us to the external complementarities criteria. So, the threats from these two complementarities should be taken into consideration when planning product upgrades and new product introductions.

- New substitutes threats: A joint venture between five Japanese manufacturers was formed to develop a standard for a web enabled TV.⁴⁴ Although this standard is intended for Japan, there is a risk that it may be expanded to other countries. However, we do not expect to have a web enabled TV before 2008 because the standard is still not completed. The other aspect that reduces this threat is that even with the availability of web enabled TV in the market, our product will still be demanded by customers who are not willing to change their TVs or who cannot afford the cost of such TVs. On the other hand, other companies such as Apple and Cisco announced their plans to introduce products that allow access to Internet TV on the TV set but their products will still require a computer to operate.

4.1.3 Key Success Factors

Based on the previous analysis of the target segment and market, SWOT, and consumer surveys, the following represent the key success factors that should be considered in order to achieve a high market penetration.

- Speed to market: It is necessary that the iTV should be launched once it can fulfil the basic needs of our beachhead consumers.

⁴⁴ Yukari Iwatani Kane, "Sony and Rivals Seek Standard for Internet TV," *Wall Street Journal* (2006), Eastern Edition, <http://www.proquest.com/>.

- Access to capital: There is a major need for funding at an early stage to cover the cost of patent application, manufacturing, and marketing expenses.
- Continuous product innovation: With the technological shift that may increase consumer needs as well as drive many players to enter the competition, we need to continue to innovate so our product meets the needs of current target consumers as well as future ones. This will also help to decrease the degree of dependency on complimentary products and will help to keep Varietize ahead of competitors. By utilizing our technical expertise and powerful product design, we can provide the company with a high capability in this regard.
- High penetration in beachhead segments: To strengthen our brand name, we need to achieve high market penetration in the first year.
- High incentives for distributors: To gain access to key distributors and shelf space, we need to provide high incentives.
- Business and market development team: This will be a major requirement for future success and growth. According to an MIT study, 80-95% of purely technical spin-offs fail, while 80-95% of MIT teams that combine business, marketing and technical skills succeed.⁴⁵
- Online sales: Our beachhead consumers have strong reliance on online shopping.

⁴⁵ Kenneth Morse, "Critical Success Factors in Starting High Tech Ventures and the Key Role Venture Funding," http://www.mit-ef.jp/seminar_old/20020807/20020807_01.pdf.

4.2 Marketing Strategy

4.2.1 Positioning

The positioning for the first version of the iTV will focus on the important attributes for our beachhead consumers and on their main reasons to buy the iTV. Such information was observed in the consumer survey data. The following is a positioning statement that follows the guideline for new innovations positioning:⁴⁶

For: DSL Internet household subscribers who need access to online TV/VoD content

Who are dissatisfied: by the limitations and inconveniences of current online TV setups

Our product: is an Internet receiver with partial PC functionality

That provides: a convenient solution to view online TV content

Unlike: current substitute products that require a computer and attendance at the keyboard to browse online TV channels

We have designed: an Internet TV adapter that can sit on the top of the TV set and gives the user better control for browsing online TV channels through a remote control unit, without the need for a computer.

4.2.2 Differentiation

Technological image superiority is a very important tactic in the period of the product's launching.⁴⁷ This is because innovator buyers consider this an important

⁴⁶ Geoffrey Moore, *Crossing the Chasm*, rev. ed. (Collins Business Essentials, 1999), 154.

⁴⁷ C Easingwood and S Harrington, "Launching and Re-launching High Technology Products," *Technovation* 22, no. 11 (2002): 657-666, <http://www.proquest.com/>.

attribute when purchasing new technological products. Varietize should emphasize this image superiority when promoting the iTV.

Varietize should also promote the other areas where customer benefits are achieved. These areas are mainly those mentioned in the positioning statement as “convenience of use” or the “lack of need for a computer” to view online TV content. Since convenience is a highly rated attribute by our beachhead consumers,⁴⁸ our product’s high price compared to that of current substitutes would not be an obstacle for adoption.

We can also differentiate on the software upgrade feature. Customers will get free software upgrades for the iTV for a period of two years: the assumed period of life for the product. This does not mean that the product fails after a period of two years. We assumed this life period due to the technology fast advancement that makes a two years period enough for new products to emerge and overcome an existing product. This feature will confirm for consumers that they will continue to have an up to date product. In addition, the free software upgrade, that is valid for a period of two years, will be considered better warranty service than what is offered by current substitutes.

In short, differentiation should emphasize that the consumer will buy a technologically superior product that can provide best convenience when viewing online TV content in a comparable environment to traditional TV service. It should also emphasize that the higher price is paid in return for convenience, the extended software upgrades and the lack of need for a computer.

⁴⁸ Survey Data

4.2.3 Advertising and Promotion

Advertising is classified into four categories that are based on the advertisement's aim.⁴⁹ The four categories are:

- Informative Advertising
- Persuasive Advertising
- Reminder Advertising
- Reinforcement Advertising

Since iTV is a new product, the first two categories are applicable in the early stages. Informative advertisements are intended to create brand awareness by providing basic information about the product and the company, preparing consumers for the next advertising category. This can be achieved through pre-launch information or advertisements with memorable messages. Persuasive advertisements are intended to create desire or preference for a product by showing relative product benefits compared to competing indirect substitutes.

Pre-launch information about new technologies is an essential prerequisite for market penetration.⁵⁰ To create brand awareness for the iTV, it is recommended that pre-launch information be published in media outlets that are relevant to innovators' and visionaries' buyer groups. It is also recommended that external markets such as

⁴⁹ Philip Kotler, Kevin L. Keller, and Peggy H. Cunningham, *Marketing Management* (Toronto: Prentice Hall, 2006), 571.

⁵⁰ C Easingwood and S Harrington, "Launching and Re-launching High Technology Products," *Technovation* 22, no. 11 (2002): 657-666, <http://www.proquest.com/>.

distribution networks, resellers and online TV content providers receive this information to pass it to customers. Technology trade publications and press releases are some possible ways to reach customers and external markets at pre-launch. Careful planning is required for the information released, if patent copyrights are not granted at time of information disclosure.

Being in the early stages of the market, some considerations should be taken with planning suitable messages for persuasive advertisements. In young markets consumer knowledge of the product is limited, which will reduce their ability to process information from ads. Research shows that advertisements with argument focused appeals and negatively framed messages are more effective in early markets.⁵¹ Comparing different behaviours between iTV and our indirect substitutes is one type of argument appeal that suits our ads and shows the key attributes of our product. Also, focusing on how a consumer can avoid or prevent a potential problem, such as the need to attend his computer whenever he needs to change the channel, is an example of a negative framed appeal that will again showcase the key attributes of our product.

Regarding media outlets for advertisements at time of launch, we should post our advertisements where early adopters can be reached. Early adopters search for information about new products on technology related media like PC magazines and the Google search engine. It is also possible to reach our beachhead customers on websites that offer online video content.

⁵¹ Rajesh K Chandy et al, "What to Say When: Advertising Appeals in Evolving Markets," *JMR, Journal of Marketing Research* 38, no. 4 (2001), <http://www.proquest.com/>.

Varietize's website should be utilized as another source for advertising and promotional activities for early stages as well as later stages of the market. A survey conducted by Statistics Canada in 2005 found that more than 42% of Internet users reported browsing online for consumer electronics items for personal or household use.⁵² Press releases, publications, speeches, and appearances at seminars and conventions should be published on the company's website. The website should also include interviews, opinion pieces and feature stories that focus on the most important product attributes, especially those on which our product positioning is based.

Another useful promotional activity is demonstration at resellers' stores. The busiest stores in different areas should be selected as demonstration locations. Demonstrations can be done on weekends or during peak times. The importance of these demonstrations is that they build product awareness and clearly show the product's benefits. They can also serve as customer training on the iTV. We can also post demonstrations using Adobe Flash on the company website. Another promotional activity is sponsoring contests that take place at resellers' stores by giving free units of the iTV to winners.

4.2.4 Distribution

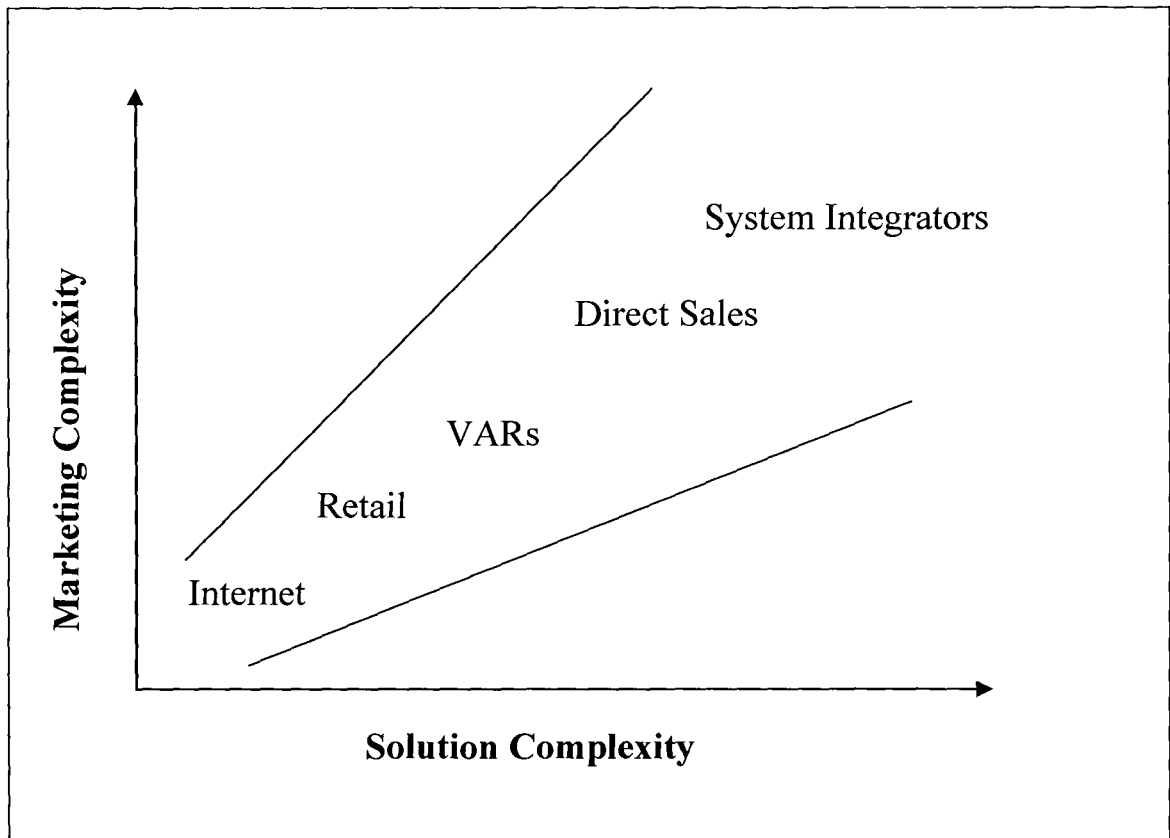
Marketing theory has identified several channels that can be used as intermediaries for iTV to reach customers. The suitability of each of these channels depends on the marketing and solution complexity of the product.⁵³ As indicated in Fig.

⁵² Statistics Canada.

⁵³ Paul Wiefels, *Chasm Companion* (Harper Business, 2002), 147.

4.2, marketing complexity relates to three attributes: source, buy and support. Solution complexity relates to two attributes: use and install.

Figure 4.2: Distribution Channel Suitability Using Marketing and Solution Complexity



Source: Paul Wiefels, *Chasm Companion*, 2002, Harper Business, p.147

We think that our product can be characterized by a low complexity in solution and marketing. Based on figure 4.2, we recommend the Internet and retail to be the channels of distribution. The importance of the Internet as a channel is clearly seen by looking at statistics about Canadian consumer purchasing habits. A survey conducted by Statistics Canada in 2005 found that 52% of Canadians made purchases online and that 16% of Internet users reported buying at least one consumer electronics item through the

Internet.⁵⁴ Another justification is the characteristics and preferences of our beachhead segment. We have seen in figure 3.9 that 45% of consumers in our beachhead market expect to buy this product online from the vendor.

There are two strategies for selling the iTV online. The first is partnering with an online retailer and the other is to use direct online sales through the company website. The benefits of the former are the higher efficiency and the lower cost, while the latter provides us with better feedback by being in close contact with our customers. We should be more inclined to the latter since consumers in our beachhead segment have a higher preference for this strategy.⁵⁵ As for retail, we recommend big electronics stores such as Future Shop, Best Buy and London Drugs. To reach small retailers, we recommend a selective distribution strategy.

VARs are companies that add some features for a product before reselling it. This is a distribution channel option that should be considered once the iTV demonstrates demand and after it starts supporting special online TV/VoD content that requires client software on the user's computer. The software version of iTV that supports this special online TV is expected to increase the solution and marketing complexity, which necessitates the need for VARs. Solution and marketing complexity originates from the requirement for technical cooperation between Varietize Technologies and the companies who are offering this type of online TV service. Such companies will be suitable VARs and the iTV can be bundled with their current services.

⁵⁴ Statistics Canada.

⁵⁵ Survey Data (Figure 3.8)

System Integrators are companies that integrate two different products. This channel of distribution is a possible option for Varietize if it decides to work with specific TV manufacturers who agree to embed the iTV within the TV set so the two products can be sold as one unit.

4.3 Implementation and Control

Varietize should hire an experienced marketing and business development specialist to work on the implementation and control of this marketing plan. The specialist will look after product announcements, negotiations with distributors, advertising campaigns and control of the marketing plan.

4.3.1 Product Announcements

After finalizing the product development stage and during prototype development and testing, we expect to file patent application and start pre-launch announcements. Before the product launch, three seminars should be held in the three major cities in Canada: Montreal, Toronto and Vancouver. Buyers or representatives from big and small electronics stores, online retailers, major Canadian consumer electronics distributors and technology magazines should be invited to these seminars. Table 4.1 shows the recommended list of attendees at these seminars.

Table 4.1: Recommended Attendees at Seminars

Retailers	Electronics Retailers	Online Retailers	Distributors	Technology Magazines
Staples	Best Buy	Tigerdirect.ca	Oxyenergy Electronics	Computer World Canada
London Drugs	Future Shop	NCIX.com	Dynamic Digital Technologies	Network World Canada
Canadian Tire	Radio Shack	Amazon.ca		
Super Store				
Wal-Mart				

Computer World Canada and Network World Canada are two Canadian technology magazines that are relevant for pre-launch announcement of the iTV, through publication of company prepared white papers or information about company organized seminars.

4.3.2 Approaching Distributors and Retailers

After holding the seminars, buyers from distributors and big retailers should be contacted again. If indirect substitute products are carried by the contacted distributors, analysis should be done to evaluate the effect of that on the iTV. Other aspects that need to be evaluated include growth records, financial strengths, cooperativeness and service reputation. Distributors would be expecting high margins for selling the iTV compared to existing products margins due to the risk associated with new products. Such margins could drop in further years once the iTV demonstrates demand. After finalizing deals with intermediaries, we need to prepare their sales force by providing them with training on the iTV. Non-exclusive consignment agreements that expire after one year should be

considered as a desperate option if the company faces any difficulty in accessing the market or distributors.

4.3.3 Advertising Campaign

To have an effective advertising campaign, we need to hire an advertising agency that is aware of the Canadian consumer TV market. The following are three identified advertising agencies that have experience in consumer products marketing campaigns.

- Ogilvy & Mather: an international advertising agency that currently handles advertising for Telus's consumer products.
- BBDO: an international advertising agency that currently handles advertising for Shaw Cablesystems.
- Cossette Communications Group: an advertising agency with offices in major Canadian cities. Cossette currently handles the advertising for Future Shop.

One issue that may prevent Varietize from getting access to these advertising agencies is the high charges required by them. If funds were limited, the company should consider less expensive agencies. The marketing specialist will work with the advertising agency to prepare different ads and to plan the media and locations in which these ads will appear. However, we strongly recommend online ads at the websites of online TV providers like JumpTV and at Internet TV directories such as wwiTV and BeelineTV. These are the websites that our current beachhead customers may access when they view online TV content.

4.3.4 Control

Control of the plan should focus on evaluating different marketing decisions:

- Effectiveness of different advertising media
- Effectiveness of different distributors or resellers
- Effectiveness of different ads

To collect related data, the adopters of the iTV should be contacted. The company can get contact information for adopters without major efforts or cost. Since new purchasers of the iTV should register their product with the online company server in order to get free software updates, they can be asked for their contact information during registration. Future consumer surveys can be conducted with adopters to get feedback that may help in controlling and improving marketing decisions. Following are some of the key questions that should be included in future surveys:

- 1. How did you hear about the iTV for the first time? (Specify advertisement and media)*
- 2. How do you evaluate different advertisements for the iTV i.e. effectiveness, frequency of appearance?*
- 3. How do you evaluate the service you received when you purchased the "iTV"?*

While it is important to evaluate marketing decisions through users of the iTV, it is worth noting that information from non-adopters will also provide great insights about any weaknesses in the marketing plan. A consumer survey will be required with non-

adopters of the iTV to get feedback about product awareness, reasons for not buying the product, and the effectiveness of different advertisements. Data collected from this survey help to detect any hidden marketing plan weaknesses.

Evaluation of different distributors and resellers could be done by tracking the sales of these intermediaries. Varietize should work with them to uncover and solve any issues. Decisions should be made regarding keeping current resellers or stopping relationships. Such decisions will be based on several aspects:

- Effect of other products carried by them on iTV sales
- Achieved sales in the previous year
- The new margin required by them for the next year

5 CONCLUSIONS

The following conclusions are drawn from this study:

- Canada is one of the countries with the highest penetration for DSL Internet home service. This makes Canada a very suitable beachhead geographic market for the iTV.
- The Internet TV industry is in preparation for an explosion. Currently, traditional TV service providers are still not seeing any threats from this industry since its penetration within households is still considered low and it is still not used as the main TV service. However, reaction from the current TV providers should be monitored, especially when we know that many of these providers are also selling DSL Internet service, a major complementary product for the iTV.
- Penetration of traditional TV services is estimated to reach 85% within Canadian households in 2008. This will provide a large market opportunity for the online TV industry as long as this service can provide an environment similar to that of traditional TV services.
- A number of factors and trends were identified as demand determinants. While some of these factors were considered in our demand estimation, others were not expected to affect demand in the short term. They should however, be revisited in future marketing plans.

- Varietize should be careful about the factors that are essential for its success. Access to capital, speed to market and development of a marketing team are essential for its short term and long term success. However, speed to market will put some limitations on the iTV's capabilities. So it is a priority to avoid this weakness in later stages through the continuous product innovation that is essential for the company's long term success. In this regard, Varietize should improve some of the important features like the ability to view recorded content and the ability to download online video files. This will be feasible if an Internet browser is included in future versions of the iTV. In addition, an internal memory drive will help users avoid the complexity of external hardware for content recording.
- Currently there are no substitutes in the market that provide comparable convenience to what the iTV provides and this fact was taken into consideration when demand for the iTV was estimated. So the introduction of other products that compete with the iTV on our beachhead customers' most perceived features will require an adjustment for this demand.
- The consumer survey and the demand estimation that were implemented in this study represent a good base and guideline for future surveys. However, due to their limitations, we recommend that Varietize conducts another survey and implements another demand estimation that avoids the mentioned limitations. With a higher budget, a larger and more representative sample can be surveyed or interviewed to provide more accurate results.

APPENDICES

Appendix 1 Available Online TV Channels Streaming Online from China

Channel	Description
BJ IPTV	Movie channel
CCQTV	General TV station from Chongqing
CCTV E&F	CCTV E&F Espanal & France Program
CCTV XW	News channel
CCTV-1	CCTV-1 features TV plays, galas and documentaries
CCTV-4	Serves overseas audiences and residents in Hong Kong, Macao and Taiwan
CCTV-5	Chinese sports TV channel
CCTV-9	English-language TV channel
FGMTV	FangGuangMing
LNTV	TV station from the province Liaoning with recorded streams
LSTV 1	From Southwest of China-Lishui City
MTV China	Music TV
NJTV 1	News Channel
NTDTV	New Tang Dynasty
NTDTV	New Tang Dynasty Television
RETV	Located in Rugao City Jiangsu
SDTV	Located in Shandong
Star sports	Sports TV
STV News	Shanghai Oriental Television
TVS	Recorded streams available on website
WCETV	Many TV stations available on website
XATV-2	TV from Xian City

Source: wwitv.com

Appendix 2 Available Online TV Channels Streaming Online from Canada

Channel	Description
Argent	Financial channel
BCCTV News	Recorded news from Vancouver
Canal Savoir	Talk-show and scientist channel in French language
CBC Calgary	Local news from Calgary
CBC Edmonton	Recorded Edmonton evening news
CBC Iglaaq	Local news from Iglaaq
CBC Manitoba	Local news from Manitoba
CBC Montreal	Local news from Montreal
CBC National	Recorded News
CBC New Brunswick	Recorded news at six from Fredericton, New Brunswick
CBC News hourly	Recorded world news
CBC North	Recorded daily news in inuktitut language
CBC North	English version of recorded daily news
CBC Northbeat	Local news from Northbeat
CBC Nova Scotia	Recorded News from Halifax, Nova Scotia CA (CA)
CBC Ottawa	Local Ottawa news, weather and sports
CBC PEI	Local news from Charlottetown
CBC Saskatchewan	Local news from Saskatchewan
CBC Toronto	Local news from Toronto
CBC Toronto	Recorded News from Toronto
CBC Vancouver	Recorded News from Vancouver
CityNews	Toronto's 24 newssource
CPAC English	Canadian Parliament Channel showing the proceedings of Parliament from Ottawa
CPAC French	Canadian Parliament Channel showing the proceedings of Parliament from Ottawa
CTV News	News station
Didar TV	TV station located in Hamilton (ON) in Persian language
Eastlink	Offers a wide variety of local programming
IBC Today	Top stories World Wide
LCN	News TV channel
LTV News	Local serving Sault Ste Marie Ontario and Sault Ste Marie Michigan
Miracle Channel	Religious TV channel
Northbay	Local TV from Ontario
Radio Canada	Recorded News available on website (in French)
Reservoir Films	Movie channel
Shop TV Canada	Shopping TV

Channel	Description
SHOPTV Canada	Southern Ontario's only infomercial TV channel offering a unique mix of one-of-a-kind products
SLN	Saskatchewan Legislative Network
TBTv	Local TV station from Thunder Bay, ON, with recorded news
TFO	Educational and cultural TV from Ontario
The Shopping Channel	Exclusive deals and auctions on thousands of brand name products
The Stream	Religious Web TV
Toronto TV ch 1	Independent WebTV station Chinese channel
Toronto TV ch 2	Independent WebTV station
Toronto TV ch 3	Independent WebTV station
Toronto TV ch 4	Independent WebTV station
Toronto TV ch 5	Independent WebTV station Community news
TSN	Sport TV channel with on demand news
TV5	Recorded French world news
TVA	French-speaking general channel from Quebec
TVC9	Local TV
VTV	Vancouver TV News at six, including archives
WHL	Ice hockey channel

Source: *wwitv.com*

Appendix 3 Available Packages on Jump TV

All-Star Arab Package (Non US & Canada)	Dominican Package	Peruvian Package
All-Star Arab Package (Worldwide)	Ecuadorian Package	Romanian Package
All-Star Latin American Package (Worldwide)	Egyptian Football - Premium Package	Trinbago Package
Bangladeshi Package	Filipino Package	TRT Package
Basque Package	Greek Package	Turkish Delight
Central American/Mexican Package (Non US & Canada)	Iraqi Package: 7 Channels from Iraq	TVB TV Bundle
Central American / Mexican Package (Worldwide)	Israeli Football League - Monthly Pack	TVJ Package
Colombian Package Plus Caracol (Non USA)	Jamaican Package	Ugandan Bundle
Colombian Package (Worldwide)	NCN Package	Vincy Package
CVM Package	Pan Arab Package (Worldwide)	
DIMAYOR - Basquetbol Chileno	Pan Arab Package (Worldwide Except US)	

Source: www.jumptv.com

Appendix 4 Online Consumer Survey Questionnaire

Section A: Watching computer or internet content on the TV set

To view computer or internet content on the TV set, three different methods can be used.

Advanced TV	Video Card with TV-out	PC-TV converter
LCD, Plasma or HDTV have an interface similar to a PC monitor	A computer video card equipped with an interface that suits a normal TV cable	Converter sits between a PC and a normal TV
High image resolution	Image quality is normal	Image is converted to fit with a normal TV

Q1. How would you describe your familiarity with the three methods mentioned previously? (1 is for "I am unaware" and 7 is for "I am using this method")

	1	2	3	4	5	6	7
Advanced TV:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Video Card with TV-out:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PC-TV Converter:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q2. What is your level of awareness of available online TV or online Video on Demand (VoD) content? (1 for "I am unaware" and 7 is for "I am using this service")

	1	2	3	4	5	6	7
Answer:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q3. Assuming you are considering buying a product that allows viewing computer and online content on your TV, please rate the importance of the following attributes. (1 is for "not important" and 7 is for "very important")

	1	2	3	4	5	6	7
Price (Range \$200-\$300):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality of Image:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recognized Brand Name:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low space requirement for additional hardware next to the TV:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Capability of viewing online TV or Video on Demand content on the TV:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Capability of viewing any recorded computer content on	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

the TV:							
Capability of browsing the web through the TV:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to use my PC for other purposes while content is displayed on the TV:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Product uses newest leading edge technology:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customized onscreen menu for selecting channels:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to browse online channels using a remote control unit while sitting on your couch:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other. Please give a rating here and specify on next question:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q4 . If you have not selected the "other" option in the previous question, please skip this one. What is the other attribute that you have considered in the previous question?

Q5. If the price were right, how likely would you buy a product that allows you to watch internet TV/VoD content directly on a TV set without using a computer in the same way as you watch cable/satellite broadcast on your home TV and where you can browse online channels with a remote control? (1 is for "definitely would not buy" and 7 is for "definitely would buy")

	1	2	3	4	5	6	7
Answer:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section B: The "iTV"

A new product that allows you to view online TV and online Video on Demand content on your TV is the "iTV". Some of the characteristics of the "iTV" are:

- Requires only a high speed internet service and a normal TV. PC not required.
- It displays online TV/VoD content. Future software releases will support other online video like YouTube.
- Equipped with a remote control unit to browse online TV/VoD channels.
- Video quality is similar to cable TV services.
- Priced around \$250 with a one year warranty and two years free software upgrades.

Q6. How do you describe your willingness to buy this product? (1 is for "definitely would not buy" and 7 is for "definitely would buy")

	1	2	3	4	5	6	7
Answer:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q7. What would be your main reason for buying the product? (Check all that apply)

- Avoid Satellite TV Fees
- View special TV content that is only available online
- Avoid Digital Cable TV Fees
- Achieve better convenience when viewing online TV
- Avoid Cable TV Fees
- Omit the need for a computer link to view online TV
- Other. Please answer the next question.

Q8. If you have not selected the "other" option in the previous question, please skip this one. What is your other main reason for buying the "iTV"?

Q9. Where would you prefer to buy this product? (Check all that apply)

- Online direct from the vendor
- Online from a reseller
- Big electronics store
- Small electronics store
- Other. Please answer the next question.

Q10. If you have not selected the "other" option in the previous question, please skip this one. Please specify the other location from where you would expect to buy the "iTV".

Q11. What would be your main reason for not buying the product?

Q12. How do you describe your willingness to buy this product if it was priced at \$150? (1 is for "definitely would not buy" and 7 is for "definitely would buy")

	1	2	3	4	5	6	7
Answer:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section C: Background

Now we would like to know a little about you for classification purposes only.

Q13. What is your gender?

Q14. What is your area of work or study?

Q15. What is your ethnic background? (Check all that apply)

- Asian
- African
- Eastern-European
- Western-European
- Middle-Eastern
- Latin
- Other. Please answer the next question.

Q16. If you already selected the answer that describes your ethnic background, please skip this question. What is your ethnic background?

Q17. What type of internet service do you have at home? (Check one)

- None
- Dial-up
- Lite Speed Internet Connection
- High Speed Internet Connection

Q18. Select the TV service(s) you currently use at home? (Check all that apply)

- None
- Subscription Based Satellite
- Free to Air Satellite
- Free Online TV
- Subscription Based online TV
- Cable TV
- Digital Cable TV
- Telus TV (IPTV)

Q19. Please select the technology product(s) that you own. (check all that apply)

- IPOD (Video)
- Blackberry / Palm
- Laptop
- Digital Camera
- MP3 Video Player
- Handheld Computer
- Delphi MyFi Satellite Radio
- DirectTV HD DVR
- Sonos Digital Music System
- Sony PlayStation Portable
- Other. Please answer the next question.

Q20. If there are other technology products that you have purchased in the last year. Please mention them below.

Q21. What is the approximate total amount you spent on consumer electronics products within the last year?

Q22. How did you look for information about technology products before purchasing them? (Check all that apply)

- Through the Internet
- Visited Retailers
- Checked Business Media
- Through my friend who was using it
- Checked Technology Media
- Other. Please answer the second question.

Q23 . What other sources you use to look for information about technological products you plan to purchase?

Q24. How would you describe yourself as a purchaser of new consumer electronics products? (check the one that you think describes you)

- I'm usually one of the first to buy new tech products.
- I wait a little while, but I'm still among the earlier purchasers.
- I wait until the price starts to drop, or until at least 25% of people have already purchased it.
- I wait until most people have purchased one.
- I don't buy consumer electronics unless I absolutely have to.

Q25. Which of the following would most influence you when deciding to buy a consumer electronics product? (Pick One)

- Word of Mouth
- Commentary on the Internet
- Lots of my friends have it
- Product uses newest leading edge technology
- Product price is low
- Product provides a big advantage
- Other. Please answer the second question.

Q26 . What is the other thing that most influence you when deciding to buy a consumer electronics product?

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