INGREDIENT BRANDING: A CASE STUDY ON THE EMERGENCE OF
THE MOBILE PROCESSOR CATEGORY

A Thesis
Presented to the
Faculty of
San Diego State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Interdisciplinary Studies

by
Megan Jennifer Delgado
Spring 2012
SAN DIEGO STATE UNIVERSITY

The Undersigned Faculty Committee Approves the
Thesis of Megan Jennifer Delgado:

Ingredient Branding: A Case Study on the Emergence of the Mobile Processor

Category

[Signature]
William Snively, Chair
School of Communication

[Signature]
Alex DeNoble
Management Department

[Signature]
George Belch
Marketing Department

March 19, 2012
Approval Date
Copyright © 2012
by
Megan Jennifer Delgado
All Rights Reserved
DEDICATION

This thesis is dedicated to my husband for his constant support and encouragement to finish what I started and to my godfather, who was instrumental in helping me accomplish this goal.
The most important thing is to forecast where customers are moving, and be in front of them.

--Philip Kotler
ABSTRACT OF THE THESIS

Ingredient Branding: A Case Study on the Emergence of the Mobile Processor Category
by
Megan Jennifer Delgado
Master of Arts in Interdisciplinary Studies
San Diego State University, 2012

This paper examines the emergence of the mobile processor as an ingredient of the Smartphone in the wireless industry and how to influence the purchase decision of customers at point-of-sale. The techniques include a review of the relevant literature along with a comprehensive analysis of the history of successful ingredient branding efforts and the challenges faced by the new generation of brands.

In order to determine the effects that ingredient branding has on customers, a study was conducted at Qualcomm, a wireless telecommunications and processor company, to determine which marketing tactics will have the greatest impact on consumers in the retail and online purchasing environments. These results are analyzed and discussed determining the best approach to raise awareness and ultimately preference for Snapdragon mobile processors in a market where mobile processor awareness and brand awareness are significantly low. By reviewing the effects of marketing stimuli at point-of-sale in the case of the Snapdragon ingredient brand we will learn more about consumer consideration and purchase intent. The results show that increasing the efficacy of marketing stimuli at the point-of-sale will be impactful and can increase consumer consideration. The research also concludes that word-of-mouth referrals are the most powerful way of impacting consumer purchase decisions.
# TABLE OF CONTENTS

PAGE

<table>
<thead>
<tr>
<th>ABSTRACT</th>
<th>vi</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF TABLES</td>
<td>viii</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>ix</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>x</td>
</tr>
</tbody>
</table>

## CHAPTER

1. INTRODUCTION .................................................................1

2. BACKGROUND .................................................................8

    Smartphone Category .....................................................8

    Mobile Processor Component ..........................................9

    Qualcomm Incorporated ................................................10

    Snapdragon by Qualcomm Brand Platform .....................11

3. REVIEW OF LITERATURE ................................................14

    Diffusion of Innovation ................................................14

    Crossing the Chasm ......................................................15

    Dual Component Theory ...............................................18

4. PURPOSE OF THE STUDY & HYPOTHESIS .........................19

5. METHODS ........................................................................22

6. RESULTS ..........................................................................28

7. DISCUSSION ......................................................................33

    Limitations of the Study ................................................33

    Theoretical Implications ...............................................34

    Managerial Implications ..............................................35

    Future Research Directions .........................................36

REFERENCES ..........................................................................37

APPENDIX

A. SNAPDRAGON BRAND ASSETS ........................................39

B. SNAPDRAGON RETAIL MARKETING STUDY – QUESTIONNAIRE ....41
<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1.</td>
<td>Research Design</td>
<td>24</td>
</tr>
<tr>
<td>Table 2.</td>
<td>Noticeability of Snapdragon Marketing Stimuli</td>
<td>28</td>
</tr>
<tr>
<td>Table 3.</td>
<td>Efficacy of Snapdragon Marketing Stimuli</td>
<td>29</td>
</tr>
<tr>
<td>Table 4.</td>
<td>Percentage of Shoppers Choosing Snapdragon Phone(s) to Consider and Purchase</td>
<td>30</td>
</tr>
<tr>
<td>Table 5.</td>
<td>Source of Information for Next Smartphone Purchase</td>
<td>32</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

PAGE

Figure 1. Cisco satellite receiver with Dolby Digital Surround Sound. ....................................3
Figure 2. Bubblicious Gum with Nutrasweet. .................................................................3
Figure 3. Nike product with Dri-Fit logo .........................................................................4
Figure 4. Intel Inside advertising examples ........................................................................6
Figure 5. Snapdragon brand platform .............................................................................12
Figure 6. Snapdragon internal and external touch-point diagram ....................................12
Figure 7. The revised technology adoption life cycle .......................................................16
Figure 8. Virtual in-store retail shopping environment ....................................................23
Figure 9. Online shopping environment ..........................................................................23
Figure 10. Processor specification mention for control group and others ..........................24
Figure 11. Marketing stimuli: Snapdragon system-level logos (S1, S2, and S3) ....................25
Figure 12. Marketing stimuli #2: Screen shot from 40 second Snapdragon marketing video ................................................................................................................26
Figure 13. Marketing stimuli #3: Snapdragon product description ....................................27
ACKNOWLEDGEMENTS

I would like to express my sincere appreciation to Dr. William B. Snavely for his guidance and wisdom. As a distinguished professor in the field of Communication, Dr. Snavely has provided me with a great deal of coaching and support to develop and produce this thesis. In addition, I would also like to acknowledge Dr. George Belch and Dr. Alex DeNoble for their willingness to serve on my committee and for their feedback and input along the way.
CHAPTER 1

INTRODUCTION

Within the marketing discipline, ingredient branding is a term used to define the practice of using a component contained within the larger product as an opportunity to identify enhanced value (Desai & Keller, 2002). This practice has become increasingly utilized within the marketing discipline. The objective of ingredient branding is to illustrate to the consumer that there are quality ingredients used to build, develop or produce the product and to create consumer pull (Kotler & Pfoertsch, 2006). Consumer pull is a term referring to consumer demand at the retail level. There are a multitude of ingredients in today’s modern consumer devices. For example, in a computer there are many components that are sourced from various suppliers such as the CPU, GPU, motherboard, and LCD display. However, not all of these ingredients are branded at the consumer level and are mostly known by the manufacturer who integrates all of the components and sells the final product. Establishing the value proposition for that ingredient as the core value adding element is the key objective. Some notable ingredient brands include Gore-tex, Nylon, Lycra and NutraSweet as well as Dolby, Intel and Bosch (Kotler & Pfoertsch, 2006).

An ingredient branding strategy typically has similar objectives to a general branding strategy. The creation of customer preferences within a pre-defined target audience is the first objective for many companies. Secondly, the strategy will seek to improve customer loyalty and commitment to return to purchase or upgrade devices powered by that same ingredient in the future. However, the most crucial goal of ingredient branding is to increase potential for sales volumes and market penetration. A powerful market position can ensure that a company can charge a premium for their component and ultimately increase the value of the company and the product (Kotler & Pfoertsch, 2010).

A similar but distinct concept to ingredient branding is co-branding. These two concepts vary in that co-branding is the basic inclusion of other brands in or on marketing tactics (Kotler & Pfoertsch, 2006). Ingredient branding, as stated, is simply the branding of one component that illustrates the overall value of the product itself. It is also possible to
consider ingredient branding as a specific category of co-branding (Blackett & Boad, 1999). Building a brand, as a general practice, whether via ingredient branding or co-branding is something that can take years to accomplish since the process happens within the mind of the customer. Influencing the customer’s opinion, awareness and decision process is how a brand becomes a powerful force (Lamons, 2005).

Ingredient branding can have a significant strategic benefit for both the parent company and the ingredient brand company. Ingredient brands themselves can be highly beneficial for the host brand, enhancing the perceived value, creating consumer pull, and making what would otherwise be invisible, visible (Blackett & Boad, 1999). For the ingredient brand, the awareness of the brand and consumer demand can drive up prices of the ingredient itself as the perception of the component is seen as valuable. Some of the most notable ingredient brands can fall into several categories, including supplier ingredient brands, manufacturer to supplier ingredient brands and proprietary ingredient brands.

Supplier ingredient brands often highlight the competency of the component and are highly specialized for the product category in which they are sold. For example, Intel microprocessors are specific to the personal computer industry, and Dolby is specific to the home and theater industry. As seen in Figure 1, the Cisco manufactured satellite receiver is branded with the Dolby Digital Surround Sound logo as a mark of quality and signifying the inclusion of this value adding ingredient brand within the product. Both of these suppliers have been successful by demonstrating their consistency and investment in innovation along with a strong partnership with a large number of original equipment manufacturers (OEMs). Both Intel and Dolby have made significant investments in their brands and have achieved product branding to identify the inclusion of their brand in the product (Blackett & Boad, 1999).

Manufacturer ingredient brands and supplier ingredient brands are two separate categories within the Ingredient Branding discipline. A product such as NutraSweet, an artificial sweetener, is included in many different food products, not just within one industry, such as beverages. Because of this variance of business operations and objectives, these types of ingredient brands often are included at different points of the value chain, and NutraSweet can be sold independently to the manufacturer as well, making this strategy more varied and slightly more complicated (Blackett & Boad, 1999). An example of Nutrasweet’s ingredient
branding presence can be seen in Figure 2 on the packaging of Bubblicious gum with a prominent logo inclusion on the top left corner.

![Bubblicious Gum](image1)

**Figure 2. Bubblicious Gum with Nutrasweet.**

The third category, proprietary ingredient brands, consists of brands that were created in-house by the host brand or were part of an acquisition and are owned by the host brand. An example of this would be with Nike’s Air-Max or Dri-Fit lines. Nike invented this technology in-house, yet they use it as a separate brand on products that leverage this Dri-Fit technology. Nike uses these ingredient brands on products to show the consumer that the product contains their latest technology and this can be a differentiator at the point of sale (Blackett & Boad, 1999). As seen in Figure 3, a pair of athletic socks made by Nike also include the Dri-Fit identification to identify that these pair of socks are made with this exclusive technology.

![Dri-Fit socks](image2)

The OEM must take into consideration whether or not they will include the ingredient brand in their product marketing strategy. This strategic decision can significantly affect the
success or failure of a host brand. OEMs must consider if the ingredient brand will add value and if the investment in branding will not exceed the value derived. The OEM also has to be convinced by the ingredient brand company that inclusion of their brand will help derive value for the host company. The ingredient brand will likely be highly visible and will play a key role in the host brand’s marketing and advertising campaign. The host company and ingredient brand need to ensure their objectives are aligned such that increased sales for the host brand will also mean increased sales for the ingredient brand, making the objectives of the two brands highly correlated (Blackett & Boad, 1999).

Another factor at play in the decision to ingredient brand is the competitive landscape. Host brands must consider if competing OEMs are adopting and using ingredient brands, which may influence their decision to include an ingredient brand to compete with other brands. Host brands must also be aware of the risk associated with featuring an ingredient brand that it may either overshadow the parent brand or carry more weight in the consumer decision than the OEM brand does. OEMs also need to take into consideration how the ingredient brand will evolve in relationship to their brand. Long-term alignment and potential to increase the value of their products is the primary reason to partner with an ingredient brand (Blackett & Boad, 1999).

An ingredient brand strategy can include any number of tactics. This includes, but is not limited to, logo on box, logo on product, logo at point-of-sale display and the use of any
number of online or social media channels to communicate the inclusion of the ingredient brand in the host brand.

One pitfall OEMs should be aware of is the inclusion of multiple ingredient brands. OEMs should be selective and include only the brands that are central to making the primary brand work (Tradii, 2010). The ingredient brand should already have some level of awareness and demand to be able to measure the impact of the inclusion of the ingredient brand in marketing strategy; however, it is possible for the ingredient brand to gain notoriety by association with the successful host brand (Tradii, 2010). The other danger of the inclusion of an ingredient brand is that the consumer has a pre-existing negative connotation of the ingredient brand and has a negative response to the host brand as a result. For example, the inclusion of Irish Spring soap scent in Tide laundry detergent. A consumer may be aware of Irish Spring and not care for the scent and would select another product causing an adverse effect on the host brand (Desai & Keller, 2002, p. 3).

Both Qualcomm Incorporated and Intel have sold billions of their processor chips to OEMs around the world. Intel has powered desktop and notebook PCs and Qualcomm has powered mobile phones and Smartphones. The primary difference between the two companies is that Intel has made major investments in marketing and being known by the consumer as the value added ingredient in the computing product on the shelf. Industry estimates are that by 1994 Intel had already invested over $500 million dollars on their Intel Inside campaign efforts and this was just the beginning. Intel continues to invest in their ingredient brand power with often 50-50 co-op matching funds to guarantee their brand will be noticed by consumers (Lamons, 2005). The Intel Inside campaign also had a unique impact on the manufacturing community. Intel’s branding opportunity was available to large and small manufacturers, which in the end helped the smaller brands compete when they could boast that they too had the powerful, high-tech Intel chip inside their products (Jackson, 1997).

While not every consumer can explain the technology behind an Intel microprocessor, the consumer likely understands that it is the ‘thing’ inside their computer that makes it run. Qualcomm on the other hand has invested primarily in technology engineering, believing that their superior technology would speak for itself. With annual revenues in excess of $6 billion dollars, it is hard to argue that this strategy hasn’t been successful for Qualcomm. Boasting a
robust patent portfolio and extensive set of Intellectual Property (IP), Qualcomm continues to license its technology and continues to innovate and stay on the cutting edge of wireless technology (Mock, 2005). However, the competitive landscape is evolving, and Qualcomm will need to consider its options and how to compete with brands that already have consumer loyalty.

In 1991, Intel started its ingredient branding push. The idea was to convince OEMs to include the “Intel Inside” branding in their marketing campaigns to educate consumers that Intel was inside the device they were purchasing. Intel wanted to stand for reliability and quality. Intel took an aggressive approach toward training retail sales associates along with consumers about what a microprocessor is and why Intel was their best bet (Whitwell, 2005). Intel’s branding is consistent with the use of their Intel logo and “Intel Inside” mantra (See Figure 4).

![Intel Inside advertising examples.](image)

Intel continues to have a strong brand presence in the computer processing category, and the logical next move would be to include their processors in mobile devices. After years of speculation, Intel recently announced that their Atom processor will be adopted by several leading mobile phone manufacturers (Lev-Ram, 2012). Although Intel’s brand awareness is high in the desktop and notebook space, this raises the question if their brand can translate to the new emerging categories of Smartphones and tablets. With their strong brand power and
funding of marketing campaigns, Intel’s presence on the scene may at least help drive awareness for the mobile processor industry as a whole, much as it did for the PC industry (Lev-Ram, 2012).

The theory behind ingredient branding is that due to intense market conditions and high levels of competition, consumers are overwhelmed with information about products and services. Ingredient branding is a way of highlighting for the consumer what it is about that product that has value and in turn helping to drive and influence their purchasing decision (Baumgarten, 2007). Ingredient branding is also a way to establish a defined partnership between supplier and manufacturer. This relationship can show that a manufacturer is committed to quality products and is willing to invest in the latest technology to help differentiate their product and to provide the best solution to the consumer.

The question that arises surrounding ingredient branding is: how can a successful ingredient branding strategy be formulated and implemented in conjunction with the emergence of a new product category? Developing and defining an ingredient brand is more about informing and educating the consumer that the components used to build the end product are just as important as the product itself. Determining how to raise awareness and drive demand are the primary challenges an emerging ingredient brand will face when attempting to rise to the top.
CHAPTER 2

BACKGROUND

A number of terms associated with this research will be defined for the purpose of this study and in preparation for discussion of the findings and conclusions.

SMARTPHONE CATEGORY

As technology evolves, new products and categories emerge as customer demand rises for faster, better and more inexpensive gadgets and devices. The Smartphone category is one of the most rapidly growing technology segments in today’s global marketplace. With greater than four-billion Smartphone devices forecasted to be sold from 2010-2015, the total addressable market is significant (Milanesi, 2011). Consumers too are becoming more knowledgeable about what they want their Smartphone to do; this includes email, web-browsing, application processing and other advanced functions that in the past consumers relied on a PC computer to perform. Only now, in the Smartphone space, all of this must be done while on-the-go. Smartphones need to be smarter than just a desktop or laptop plugged into the electrical outlet. Smartphones need to be connected wirelessly, able to be extremely power efficient and have the capability to perform any and all functions while in motion, anywhere in the world.

Consumers are becoming more tech-savvy as their demands increase. Ten years ago, only the few early adopters owned a cellular phone with camera capabilities. Today, consumers demand a Smartphone with camera functionality and are most concerned with the number of mega-pixels in the built-in camera. Consumers want to be sure that when they invest in a Smartphone they have a device that will satisfy all of their desired user experiences. Today, Smartphones are highly differentiated in the marketplace. Smartphones come in various sizes, shapes and technical specifications giving consumers a wide array of options to consider when purchasing a device.

Influencing the purchase decision is critical for the success of corporations working to gain market share in this industry. Customer demand and pull is what determines what device
will sell the best and which devices will be discontinued. Determining how to best position and market these devices at the point-of-sale and in other sales channels is crucial.

There are a multitude of definitions for a Smartphone in today’s market. For the purpose of this study, we will define a Smartphone using the most common description found most recently in *PC Magazine*, one of the industry standards for high tech industry information. According to PC Magazine (n.d.), a Smartphone is a cellular telephone with built-in applications and Internet access. Smartphones can also provide a number of other features including text-messaging, email, web browsing capability, camera and video capabilities and MP3 and video players. Smartphones also often feature a high level operating system such as Apple’s iOS, Microsoft Windows or Android (PC Magazine, n.d.). A Smartphone is the evolved version of what the industry refers to as a feature phone, which is a lower end cell phone that lacks application processing capabilities.

Approximately one-third of cellular devices today have a phone powered by a Qualcomm chip, but consumers are highly unaware of this fact. Consumers often attribute their device’s excellent performance to the OEM who manufactured the device or to the battery or operating system. With such low brand awareness, Qualcomm does not have the ability to protect its current market share.

**MOBILE PROCESSOR COMPONENT**

The computer processor industry has been around from the early days of the standard desktop and laptop computers. The mobile processor is the adapted version built and designed for the mobile environment, essentially for use while on the go. A mobile processor is typically defined as a system on a single piece of silicon, or a system on a chip. These systems can perform many of the same functions. Mobile processors are high performance chips that are designed to address the power and speed of a device along with considering the power consumption efficiency (McGregor, 2010). A mobile processor is a component within the device that serves as the brain, controlling all of the functions of a device. These functions include, but are not limited to, graphics processing, application processing, baseband processing, and connectivity management. Mobile processors can be incorporated into Smartphones, tablets, e-readers and even televisions. There are many mobile processor designers and manufacturers. Some of the most notable include Apple, Broadcom,
MediaTek, Nvidia, Qualcomm, Samsung and Texas Instruments (McGregor, 2010). The mobile processor companies sell their products to original equipment manufacturers (OEMs) to incorporate into their devices that are in turn sold to the end-user. These mobile processing components are often one of hundreds that the OEMs source and build into their devices, but are perhaps the most vital component due to their capability to drive all of the major functionality of the device. The demand for Smartphones with increasing speed, power and capabilities is perhaps the driving force behind innovation in the mobile processor space (McGregor, 2010).

**QUALCOMM INCORPORATED**

Qualcomm is a wireless telecommunication giant that began as an engineering company with a few radical ideas surrounding advanced communications technologies back in 1985. The company’s founder, Dr. Irwin Jacobs, along with several of his fellow engineers and colleagues stumbled across a process called spread-spectrum technology, which they believed they could adapt from its original use in the military to use in everyday communication. With a mission to provide quality communications solutions, 25 years of innovation ensued (Mock, 2005, p. 11). Today, Qualcomm is a driving force in the growth of the wireless industry. Qualcomm’s technology has propelled consumers into the use of 3G wireless devices and into other next generation solutions around the globe. Qualcomm’s patent portfolio is robust with nearly 200 licensees in the United States and abroad which drives strong revenues and profit margins year after year (Qualcomm Corporate Website, n.d.). Qualcomm’s ability to anticipate the demands of the wireless industry years in advance and to relentlessly innovate and improve on their technology and time-to-market has led to Qualcomm’s market dominance. As the world’s largest semi-conductor company, Qualcomm prides itself on design and licensing capabilities and outsources the manufacturing to other companies who can assume the cost and apply their expertise in building the silicon chips that power billons of cellular phones globally.

Qualcomm has excellent relationships with the device manufacturers, who rely on Qualcomm to provide the most highly integrated and advanced chips on the market. Qualcomm delivers on-time, quality components, making Qualcomm a preferred chipset
supplier and partner in the industry. Consistency and long-standing partnerships with all of the ecosystem partners is what makes Qualcomm highly successful.

However, Qualcomm’s success has been noted most of all by these partners on a B2B level and also by investors who continue to note Qualcomm’s strong financial performance. Consumers have little or no awareness of Qualcomm and the products and services that this telecommunications giant develops and enables.

**SNAPDRAGON BY QUALCOMM BRAND PLATFORM**

Qualcomm has a number of chipset or mobile processor technologies. In 2010, Qualcomm decided to brand one of its most powerful chipset families, Snapdragon by Qualcomm. This branding strategy is new for Qualcomm which typically had named each of its chips with a standard nomenclature, MSMxxxx and defined the chips by their speeds and feeds and wireless interface support. By creating a family of chipsets with a tiered system of options, Qualcomm is positioning its chips as a more consumer friendly solution. Focusing on user experiences rather than technical specifications, Snapdragon mobile processors offer the opportunity for users to better understand what technology is inside their device and what it does to enhance their user experience (Shah, Elliott, Wu, Sui, & Kerr, 2011).

This new branding strategy came with the development of a new brand platform, brand personality, taglines and a set of marketing assets designed to humanize the otherwise highly technical product message surrounding Snapdragon’s offering (see Figure 5). The creation of a brand platform is a fundamental step in the process, as it indicates where the brand originated, what it stands for and what the brand aspires to be to consumers (Kapferer, 2008). The marketing team at Qualcomm developed a strategy to raise awareness for Snapdragon starting with defining the key touch-points that need to be addressed when marketing to external and internal audiences (see Figure 6). The marketing strategy also yielded a new brand platform that highlights the brand essence, brand promise, positioning, brand drivers and overall personality (see Appendix A). Building this framework is the first step in rolling out the new brand campaign to ensure the direction is clear and that all marketing tactics convey the same message to audiences globally.

In today’s market, the creation of a brand platform and marketing campaigns that will resonate and achieve the desired results is crucial to the success of Qualcomm’s Snapdragon
Figure 5. Snapdragon brand platform.

Figure 6. Snapdragon internal and external touch-point diagram.
brand along with other brands looking to get noticed at point of sale. Marketing stimuli or marketing tactics are created based on the brand platform and are designed to entice the consumer. Marketing stimuli can be an advertisement, a logo placement, a branded video a product brochure or any other type of marketing material designed to capture the attention of and educate the consumer. The objective of the marketing stimuli should consist of messages that describe how the product improves the consumers’ life, simplifies things or draws their interest and enjoyment (Vollmer & Precourt, 2008).
CHAPTER 3

REVIEW OF LITERATURE

DIFFUSION OF INNOVATION

Everett Rogers (2003) introduced a theory first in 1962 that was designed to predict how rapidly a new idea can be adopted into mainstream. This theory, diffusion of innovation, was defined by Rogers as “the process by which an innovation is communicated through certain channels over time among the members of a social system” (Rogers, 2003, p. 5). Rogers’ research on diffusion of innovations brings forth a number of sub-topics regarding adaptation and evolution of society along with how to most rapidly effect change. This theory provides a step-by-step outline of how mainstream society begins to adopt and welcome new ideas and processes. Rogers explains that there are four key channels that feed the process of innovation.

The first of the four pillars is innovation. Rogers (2003) explained that a new idea or technology must first be present and ready for adoption. The new technology must have both hardware and software components, both of which make up the physical appearance of the product and the intelligence of the product respectively. The second pillar is the communication channel, or the way by which information is passed between individuals. This communicating channel, such as TV or radio, is a fundamental source for supporting increased awareness and education. The third pillar is that of time. Time is an important factor in the innovation-diffusion process as the overall market readiness up to ultimate implementation is measured and tracked to determine the overall success rate of adoption. The fourth pillar is that of the social system. A social system is a “set of interrelated units that are engaged in joint problem solving to accomplish a goal” (Rogers, 2003, p. 23). A social system is where diffusion takes place and the way the system operates will determine how rapidly or slowly an innovation may be adopted.

Robertson (1967) claimed that innovations, or new thoughts, behaviors or products that are brought forth into being have a process by which they are ultimately absorbed. Importantly, Robertson claimed that personal influence is perhaps the most powerful tool for
influence, not mass-media advertising. Robertson also stated that when a consumer takes a significant risk, such as a financial risk, that the norms of society will ultimately influence the adoption of innovative solutions (Robertson, 1967). This suggests that in the example of a Smartphone purchase, shoppers will be most influenced by people they know who by word of mouth refer a product to them. It also suggests that shoppers, when spending significant dollar amounts on a Smartphone, will look to societal norms or trending products to help make their decision. This diffusion process can also illuminate how an innovation is communicated via various channels from individuals to social groups (Rogers, 2003).

**CROSSING THE CHASM**

Geoffrey Moore (1991) stated that one of the most difficult transitions for a high-tech company is that from early market adoption to the mainstream consumer market. A company’s ability or inability to cross this chasm determines if a company will have long term success or failure (Moore, 1991). The ability to cross the chasm, which Moore defines as the gap between early adopters and mass-market adoption, is defined by the company’s marketing prowess. This marketing push must be a force driven by all departments of the organization in order to yield the desired results. Moore’s concept is an adaptation of Rogers’ (2003) diffusion of innovation theory, but it focuses specifically on high-tech innovations specific to new technology.

The concept of “crossing the chasm” divides the market into segments of buyers (see Figure 7). The first category that Moore (1991) defines is that of the innovators or technology enthusiasts. These buyers are the first ones to purchase and are considered tech-savvy and are often willing to pay more for the first release of the product, despite potential issues with functionality. As buyers, the innovators want the newest products and are often great at providing feedback on the product and are considered good critics since they help to improve the product for future releases. Targeting early adopters, according to Moore, is vitally important. Finding their niche, such as a technology blog or providing a free beta trial is crucial to capturing this audience. Although these tech-enthusiasts are easy to work with due to their eager nature to try new things, they often don’t have influence over the mainstream as they are seen as too high tech to be easily related to.
The next market segment that Moore (1991) outlined is the early adopters or visionaries. This group differs from the technology enthusiasts in that they are dreamers. They see the bigger picture and want to use technology not just to make improvements or to see how it works, but rather to adopt technology to change how systems work. Visionaries are considered drivers in the high-tech industry because they are willing to make larger investments to adopt technology on a broader scale, not just for personal use. Visionaries usually help spark attention to the product as they are outgoing and draw attention to the product or solution they are dreaming of, helping to propel awareness. Visionaries usually hold some type of influential role in their corporation as they need the funding and backing of the team to make large investments in new technology.

The next segment is where the mainstream market begins and market potential rises. Between the visionaries and the early market is where the precarious chasm lies, according to Moore (1991). Accessing the early market requires a significant breakthrough that solves a problem or that delights more than just the early adopters and tech-enthusiasts. The people in this segment are practical and think rationally about investments in new technology. They are harder to win over as they want to see proof that the new technology is really as promised. These pragmatists, as Moore called them, tend to genuinely care where the product comes from and the quality of the product overall. They want to make a good decision and don’t want to have any regrets. These early market members are distinct from the visionaries or early adopters in that they are more cautious and prefer to see how the competition compares. The early market buyers see the value in competition as it drives down prices and as the
competitors provide alternative solutions that may be better for the consumer in one way or another.

Following the early majority is the late majority. These conservatives, as Moore (1991) called them, are not open-minded when it comes to new and disruptive technologies. Disruptive technologies are considered new products that enter the market and have the ability to alter the competitive environment either due to low pricing or innovative features and functionality (Kotler, 2003). They are much more difficult to win over and often prefer to wait to adopt new technology as they know that pricing will come down if they wait and the product functionality will often approve. This market segment is somewhat afraid of new technology and sees the risk in adopting too soon. Conservatives often lack that tech-savvy sense and prefer to buy bundled packages or pre-assembled options that will minimize the risk of the product not working. Buying products that do more than one thing is confusing to conservatives, and they will often prefer to buy the simplified version. Late adopters want low-cost, durable products that have been tested by the earlier adopting segments.

The last market segment that Moore (1991) defined is the laggards. These buyers are even more skeptical than the conservatives and often simply do not participate in high-tech purchasing. The laggards can often slow down the market with their skepticism and are quick to point out that they don’t see the product making life easier as may have been claimed. The laggards don’t believe what they read, see or hear. They are convinced that technology won’t be helpful, costs too much and isn’t worth their time or investment.

As noted above, Moore (1991) defined the chasm as the space between the early adopters and the early mass market. He described the chasm as a place of peril and warned that if a company cannot find a way to attract the early mainstream market, failure will be eminent. Moore also argued that getting to the mainstream market requires an act of bravery and often aggression. A company must put all of their weight behind the effort to gain these new customers, build awareness and essentially invade the market. This means pushing past the naysayers, and proving that the new technology is better than the competition. The mainstream wants simple solutions, so finding a way to reach them with a simple concise message is the key. This can be achieved by a number of tactics including market leadership, product claims, word-of-mouth referrals and ultimately product superiority in some category or another.
**DUAL COMPONENT THEORY**

The Dual Component Theory (Mitchell & Olson, 1981) suggests that the combination of both verbal and visual advertising elements has the most impact on consumers. It also suggests that stimuli that do include both verbal and visual aspects will impact a subject’s overall attitude towards a brand or product. Mitchell and Olson stated that when developing marketing stimuli there should be a strong combination of both written and visual components in order to maximize marketing effectiveness. This theory suggests that subjects form opinions based on both what they read and on what they hear or see. This two-path approach to advertising is believed to be most impactful in that subjects have two options to understand and assess the message being conveyed (Percy & Rossiter, 1992).

The key is to keep marketing stimuli simple and to focus on key messages. According to Kirk (2003) the art of mastering compelling advertising consists of making the message easy for the consumer to understand. Careful coordination of visual and audio elements can help with this approach (Kirk, 2003).

The literature reviewed on this topic suggests that consumers are most likely to follow a process for technology adoption. Second, in order for technology to be adopted by the mainstream market, a new product must cross over from only being known and used by early adopters over to the broader consumer group to achieve mass market success and adoption. In order to cross over this chasm, a new product must be introduced to the market and be recommended to family and friends since this is the way most consumers will base their purchase decision. Third, consumers find the marketing stimuli most effective when shown both verbal and visual elements. As this pertains to the ingredient branding discipline, it can be ascertained that new product adoption can be most impacted by word-of-mouth referrals and this is crucial to achieving mass-market adoption. It is also evident that powerful marketing stimuli at the point-of-sale can have an impact on purchase decisions. However, these stimuli must be both verbal and visual in nature and consist of a simplified marketing message that is easy to understand and translates into end-user benefits. Last, consumers are highly impacted by word-of-mouth referrals. Information provided by trusted sources, such as family and friends, can often times be the most powerful way to influence the purchase decision of a consumer.
CHAPTER 4

PURPOSE OF THE STUDY & HYPOTHESIS

The purpose of this study is to examine ingredient branding in the high tech industry and the effectiveness of marketing stimuli at the point-of-sale. Specifically, the study examined Qualcomm, Inc.’s Snapdragon mobile processor’s consumer branding and marketing elements as a case study for technology innovation and adoption by mainstream consumers. In order to quantify the impact of Snapdragon marketing stimuli in driving the purchase of Snapdragon powered phones, a research study was conducted among retail and online Smartphone shoppers. In addition, the study sought to assess the willingness of Smartphone buyers to pay a premium for Smartphone powered devices and also to upgrade to the next higher Snapdragon processor.

The findings of this research will reveal which marketing tactics are the most effective in the mobile processor space to gain the attention of shoppers and influence their purchase decisions. The findings will also indicate what type of Snapdragon marketing stimuli should be included at point-of-sale. The research will also indicate the willingness of consumers to be influenced at the point of purchase or if their decision is already made upon entering a shopping environment. According to Rogers (2003) and Moore’s (1991) research on “Diffusion of Innovation” and “Crossing the Chasm”, predictions can be made surrounding the mass-market readiness for adoption and consideration of a new product and brand. We will also test if the same theories apply to an ingredient brand product, even though the product itself is new to the market, and it is a component of a product on the shelf.

Hypothesis 1: Due to low awareness and preference for Snapdragon mobile processors, consumers will not yet have a preference for Snapdragon powered devices.

As outlined in Moore’s (1991) crossing the chasm concept, the Snapdragon processor, although an ingredient brand, should not have brand awareness or purchase preference by the early mainstream market. When surveyed, it is predicted that the subjects
will not have a brand preference for Snapdragon devices due to lack of awareness of Snapdragon mobile processors.

Further, it is predicted that once the subjects are made aware of Snapdragon mobile processors, they may consider a Snapdragon Smartphone as one of the devices they plan to purchase. It is also predicted that the largest preference will go to the Apple iPhone since the iPhone has the most mainstream market adoption and loyalty amongst current Smartphone models in the market today (Llamas, 2011).

Hypothesis 2: When provided with multiple marketing stimuli at the point of purchase, consumer consideration for Snapdragon mobile processors will increase.

This hypothesis stems from the findings of research such as the Dual Component Theory (Rogers, 2003) which suggests that marketing stimuli are most effective when used collectively and with both verbal and visual elements to appeal to all sorts of customers.

Hypothesis 2A: A marketing video used at point of sale will have the highest marketing effectiveness due to the visual and written components of the stimuli.

Hypothesis 2B: Subjects will find the video compelling and will better understand the ingredient brand when shown the video stimuli.

Hypothesis 2C: The use of a video in conjunction with the written product description will also have a high marketing effectiveness given that the subjects will have the opportunity to visualize and contextualize the marketing messages via multiple communication channels.

Hypothesis 2D: As a result of optimizing consumers’ perceptions of marketing effectiveness, Snapdragon brand awareness and consideration will also be positively affected.

It is expected that subjects who are shown multiple marketing stimuli will increase in their consideration to purchase Snapdragon powered devices, while the control group who are not shown any stimuli will not have an increase in consideration. This increased consideration will demonstrate that by introducing a new ingredient brand and category, consumers will have increased awareness and therefore may have a higher rate of consideration. These hypotheses are based on Moore’s (1991) theory that mainstream consumers will not have a brand preference until they are made aware of the new technology and benefits and are told why the new technology will make their life better or easier. In addition, Mitchell and Olson’s (1981) research also helps us to predict that the combination of both verbal and visual stimuli will have the most impact on consumers.
Hypothesis 3: Consumers will indicate that they rely on their close personal contacts for purchase recommendations when considering their next Smartphone purchase.

Based on Rogers (2003) theory of diffusion of innovation, it is believed that regardless of the marketing effectiveness level of the point-of-sale stimuli, the subjects will still indicate that personal referrals and recommendations are what have the most overall impact on their purchase decision. Rogers stated that word-of-mouth is the best testimonial and the most effective way of influencing purchase decisions. It is expected that the subjects of this study will indicate that it is their friends and family who recommend new technology or solutions. It is also believed that the retail sales associate will also have a large impact on the consumers’ purchase decision. Due to the online nature of this study, the retail sales associate will not have as much of a presence in the overall shopping experience. However, it is still predicted that when asked, subjects will indicate that retail sales associates are knowledgeable and help a great deal with a Smartphone purchase decision.
CHAPTER 5

METHODS

The subjects for this research were mobile phone users in the United States who planned to purchase a new Smartphone within the next three months. The selection criteria was based on an online screening process by which the subjects were asked to answer questions about their demographic profile and purchase intent (see Appendix B). These subjects represented shoppers who planned to purchase a Smartphone either online or from a retail store. The age of the sample group ranged from 18-64 in order to be in line with Qualcomm’s defined target market for Smartphone consumers. The sample size for the study totaled 2,040. The subjects were sorted into ten groups, or cells, and were exposed to different shopping environments and marketing stimuli.

The ten groups were categorized as either retail or online groups, based on where the subjects planned to make their Smartphone purchase. Subjects were exposed to a web-based shopping environment for the purchase exercise which was designed to be either (a) a virtual retail store in which shoppers were asked to imagine that they were in their preferred retail store; or (b) a simulated online store (See Figures 8 and 9). During their shopping experience, shoppers were shown a total of 32 different devices to choose from, of which 50% were Snapdragon powered devices.

Of the ten groups, there were five scenarios shown to the shoppers both in the online and retail shopping environment with a total of 204 respondents in each category (See Table 1). In each of the categories, the subjects were shown a marketing stimulus and then asked to make their purchase decision. A control group was not shown any stimuli for comparative purposes (See Figure 10). The resulting five categories were: (1) Control; (2) Snapdragon Logo; (3) Snapdragon Video & Logo; (4) Snapdragon Product Description & Logo; and (5) Snapdragon Logo, Product Description and Video. The mobile processor specifications for all devices were listed in the first line of the product fact tag for all groups, including the control group.
Figure 8. Virtual in-store retail shopping environment.

Figure 9. Online shopping environment.
A questionnaire was designed to capture the demographic information of the respondents to represent pre-set quotas for gender, age, geographic location, wireless carrier subscriber, high-level operating system preference, Smartphone purchase intent and planned location of purchase (retail or online). The questionnaire (see Appendix B) had a number of screening fields to ensure respondents were within the desired target market and allowed for primarily quantitative response fields, with some qualitative response opportunities. In order to test the hypotheses set forth, the questionnaire included questions to prompt responses on
Regarding brand preference, consumers were asked to select their top choice devices from the set of 32 devices provided. Of this set, half of the devices presented were Snapdragon branded products. Responses were analyzed in each group to see if product preferences changed after being shown marketing stimuli and were compared against the control group’s responses to see if any impact was made on consideration. The subjects were also asked to state if they felt the marketing stimuli were effective. Subjects were also given the opportunity to provide an open-ended response with their feedback on the marketing stimuli. This information provided insight into the subject’s response to the marketing stimuli and what mix of marketing tactics were most effective in raising awareness for Snapdragon mobile processors.

The marketing stimuli were provided by Qualcomm marketing for testing purposes. The first of the stimuli were the Snapdragon system level logos designed for use alongside Snapdragon powered devices as shown in Figure 11. There were three system levels in the market at the time of testing, Snapdragon S1, S2 and S3. These system levels represented the categories of mobile processors that were inside the devices; with S1 being the most basic and S3 being the most advanced. In the majority of cases, the S1 devices were lower priced than the S3 devices due to the fact that the system levels correlate with the least to the most advanced technical specifications.

![Snapdragon system-level logos (S1, S2, and S3).](image)

The second marketing stimulus provided was a Snapdragon point-of-sale video (see Figure 12). This forty-second video was designed by the Qualcomm marketing team to highlight the key value proposition of Snapdragon with a visual depiction of the technical
specifications. The video had words on the screen, but did not have audio other than music playing to accompany the visual effects and the text on screen. The video showed product taglines and user experience benefits along with imagery that demonstrated visually what Snapdragon is to the consumer.

The third stimulus was a description of Snapdragon processors (see Figure 13). This product description included several paragraphs of text along with the system level logos for Snapdragon giving a more detailed written outline defining the Snapdragon processor family. This description is what a retail sales associate (RSA) would be trained to learn and share with a shopper. The product description was also a stimuli provided to an online shopper that could be clicked on to read while researching their purchase online. The product description goes into more detail regarding the product specifications and technical information and is therefore the most informative piece of stimuli provided to the subjects.

Subjects were also asked to provide their insights regarding mobile processor importance in their purchase decision. After shopping, all respondents were asked to identify their top three preferred phone models. Also after shopping, all groups were shown the product description and information and then were retested to see if the knowledge impacted their ultimate purchase decision. In addition, Snapdragon system level architecture options (S1, S2, S3) were provided and upgrade willingness was also measured. Field dates for the study were September 21-October 5, 2011 and research was conducted by a third party marketing research agency, Ipsos North America.
Figure 13. Marketing stimuli #3: Snapdragon product description.
CHAPTER 6

RESULTS

Upon review of the data, it is evident that the Snapdragon logo was highly noticeable to respondents. Over 89% of respondents noticed the logo when it was present at the point-of-purchase. However, this awareness of the presence of the stimuli increased to 91% when both the logo and the video were presented and remained at 91% when the logo and description were presented. The highest percentage, 93% of respondents, noticed the logo when all three stimuli were presented to the respondent, the logo the video and the description (see Table 2). When shoppers were asked if the logo made a difference in their device selection, only 20% of those who saw the logo said yes; however, 50% of those presented with all three stimuli responded yes.

Table 2. Noticeability of Snapdragon Marketing Stimuli

<table>
<thead>
<tr>
<th>Noticed Stimuli</th>
<th>Retail</th>
<th>Online</th>
<th>Logo</th>
<th>Logo + Product Video</th>
<th>Logo + Product Description</th>
<th>Logo + Product Video + Product Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base: Test Cells</td>
<td>816</td>
<td>816</td>
<td>408</td>
<td>408</td>
<td>408</td>
<td>408</td>
</tr>
<tr>
<td>Effective base</td>
<td>811</td>
<td>763</td>
<td>396</td>
<td>397</td>
<td>392</td>
<td>388</td>
</tr>
<tr>
<td>Yes</td>
<td>728</td>
<td>739</td>
<td>338</td>
<td>374</td>
<td>374</td>
<td>381</td>
</tr>
<tr>
<td></td>
<td>89.2%</td>
<td>90.5%</td>
<td>82.7%</td>
<td>91.7%</td>
<td>91.6%</td>
<td>93.3%</td>
</tr>
<tr>
<td>No</td>
<td>88</td>
<td>77</td>
<td>71</td>
<td>34</td>
<td>34</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>10.8%</td>
<td>9.5%</td>
<td>17.3%</td>
<td>8.3%</td>
<td>8.4%</td>
<td>6.7%</td>
</tr>
<tr>
<td>Sigma</td>
<td>816</td>
<td>816</td>
<td>408</td>
<td>408</td>
<td>408</td>
<td>408</td>
</tr>
<tr>
<td></td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

For those shoppers who were shown the point-of-sale video and provided with the product description, the video improved the overall impression of the stimuli by an increase of 15% (see Table 3). In terms of the effectiveness of stimuli, 29% of respondents said that when shown the video, logo and product description that the stimuli were effective at capturing their attention when provided in conjunction with the logo. However, when the logo and the product description were provided without the video present, the perceived effectiveness was measured at only 24%. This indicates that the video provided an increase
Table 3. Efficacy of Snapdragon Marketing Stimuli

<table>
<thead>
<tr>
<th>Impact of Marketing Stimuli</th>
<th>Retail</th>
<th>Online</th>
<th>Logo</th>
<th>Logo + Product Video</th>
<th>Logo + Product Description</th>
<th>Logo + Product Video + Product Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base: Test Cells</td>
<td>816</td>
<td>816</td>
<td>408</td>
<td>408</td>
<td>408</td>
<td>408</td>
</tr>
<tr>
<td>Effective base</td>
<td>811</td>
<td>763</td>
<td>396</td>
<td>397</td>
<td>392</td>
<td>388</td>
</tr>
<tr>
<td>Makes me aware of Snapdragon</td>
<td>263</td>
<td>348</td>
<td>112</td>
<td>164</td>
<td>152</td>
<td>182</td>
</tr>
<tr>
<td>Makes me aware that there are different types of processors</td>
<td>32.2%</td>
<td>42.6%</td>
<td>27.4%</td>
<td>40.2%</td>
<td>37.3%</td>
<td>44.6%</td>
</tr>
<tr>
<td>Makes me want to learn more about Snapdragon (research, web search, talk to friends / family, etc.)</td>
<td>176</td>
<td>276</td>
<td>73</td>
<td>114</td>
<td>117</td>
<td>148</td>
</tr>
<tr>
<td>Makes me want to learn more about Snapdragon</td>
<td>20.6%</td>
<td>33.1%</td>
<td>20.8%</td>
<td>30.4%</td>
<td>25.8%</td>
<td>30.5%</td>
</tr>
<tr>
<td>Captures my attention</td>
<td>167</td>
<td>267</td>
<td>90</td>
<td>120</td>
<td>99</td>
<td>125</td>
</tr>
<tr>
<td>Makes the processor matter in my smartphone selection</td>
<td>20.5%</td>
<td>32.7%</td>
<td>22.0%</td>
<td>29.4%</td>
<td>24.3%</td>
<td>30.5%</td>
</tr>
<tr>
<td>Makes me want to purchase a smartphone with Snapdragon the next time I buy one</td>
<td>104</td>
<td>201</td>
<td>45</td>
<td>73</td>
<td>84</td>
<td>103</td>
</tr>
<tr>
<td>Makes me want to purchase a smartphone with Snapdragon the next time I buy one</td>
<td>12.7%</td>
<td>24.6%</td>
<td>11.1%</td>
<td>17.9%</td>
<td>20.5%</td>
<td>25.2%</td>
</tr>
<tr>
<td>Makes me select the phone having Snapdragon over others</td>
<td>91</td>
<td>171</td>
<td>42</td>
<td>73</td>
<td>57</td>
<td>90</td>
</tr>
<tr>
<td>Makes me select the phone having Snapdragon over others</td>
<td>11.2%</td>
<td>21.0%</td>
<td>10.3%</td>
<td>17.8%</td>
<td>14.0%</td>
<td>22.1%</td>
</tr>
<tr>
<td>Makes me select the phone having Snapdragon over others</td>
<td>85</td>
<td>154</td>
<td>30</td>
<td>66</td>
<td>55</td>
<td>87</td>
</tr>
<tr>
<td>Makes me select the phone having Snapdragon over others</td>
<td>10.4%</td>
<td>18.8%</td>
<td>7.5%</td>
<td>16.1%</td>
<td>13.4%</td>
<td>21.40%</td>
</tr>
</tbody>
</table>

of 5% in capturing the subjects attention (see Table 3). The shoppers indicated that they had a preference for a more defined product description that would allow them to compare Snapdragon to other competitive products. In addition, when shown all three stimuli, subjects indicated that they were more likely to select a device with Snapdragon over others. This is evident when subjects responded that their selection of Snapdragon devices increased from 13% when shown only the logo and product description to 21% when also shown the video in conjunction with the other two stimuli (see Table 3). This supports hypothesis 1, that consumers do not yet have a preference for Snapdragon based devices due to low awareness. Once awareness is influenced by the provision of an informative marketing stimuli, the preference for Snapdragon based devices increased.
In terms of device selection, the data (see Table 4) reveals that Snapdragon powered phones were at least one of the top three phones of choice for 53% of respondents when shown the logo only, but when shown all three of the marketing stimuli, this increased to 68%, showing that Snapdragon marketing tactics could yield an approximate 15% increase in purchase consideration. However, when it comes to actual purchase, moving past the consideration phase, only 25% of shoppers indicated they would purchase the same device they had initially selected, even after being shown all of the marketing stimuli. The majority of shoppers were found to consider at least two or more phones when making their purchases with a slightly higher skew to the online stream in consideration of Snapdragon powered phones. These findings are in support of Hypothesis 2 in that consumer consideration did increase when provided with marketing stimuli. Increase of marketing stimuli was associated with an increase in consumer purchase consideration.

Table 4. Percentage of Shoppers Choosing Snapdragon Phone(s) to Consider and Purchase

<table>
<thead>
<tr>
<th>Groups</th>
<th>Control</th>
<th>Logo Only</th>
<th>Video/Logo</th>
<th>Description/Logo</th>
<th>Description/Video/Logo</th>
</tr>
</thead>
<tbody>
<tr>
<td>One of the devices they would consider buying</td>
<td>69%</td>
<td>63%</td>
<td>72%</td>
<td>72%</td>
<td>75%</td>
</tr>
<tr>
<td>One of the top three choices</td>
<td>62%</td>
<td>53%</td>
<td>66%</td>
<td>65%</td>
<td>68%</td>
</tr>
<tr>
<td>Their #1 choice</td>
<td>34%</td>
<td>26%</td>
<td>42%</td>
<td>42%</td>
<td>43%</td>
</tr>
<tr>
<td>% of shoppers likely to buy a Snapdragon phone as their #1 choice</td>
<td>21%</td>
<td>14%</td>
<td>26%</td>
<td>22%</td>
<td>25%</td>
</tr>
</tbody>
</table>

One of the most significant findings of the study was that the logo by itself as a marketing tactic ultimately had an adverse impact on purchase decision. The control group showed that 34% of respondents selected a Snapdragon powered phone as their first choice, but of those shown the logo only 26% selected a Snapdragon device as their first choice. All of the other cells which were shown multiple stimuli were at 42-43% of those respondents who selected a Snapdragon device. This can likely be attributed to the overall low awareness of Snapdragon and when no supporting information was provided in addition to the logo, the
shoppers seemed unsure if this is something they wanted and ultimately chose to purchase a different device. This result was similar in both the online and retail streams. These findings also support hypothesis 1 in that due to low consumer brand awareness, a logo without the presence of an informative stimuli did not increase consumer consideration. These findings do not support hypothesis two in that the logo alone as a marketing stimuli was not effective at increasing consumer consideration.

Additionally, only 29% of respondents indicated that their interaction with a sales associate in the store would help them to make their own decision for a Smartphone purchase (see Table 5). Females seemed to be more willing to enlist a sales associate to help, with 32% of females agreeing that sales associates provide the information they need. When the subjects were asked which sources they consult when preparing to make their Smartphone purchase, 52.9% of respondents indicated they would consult an online product review source. Also, 53% of the subjects said that recommendations from family and friends would help influence their decision, with a higher skew towards women, with 59.7% of women relying on input from others (see Table 5). These findings support hypothesis 3 as consumers did indicate a strong reliance on word-of-mouth referrals for purchase recommendations.
Table 5. Source of Information for Next Smartphone Purchase

<table>
<thead>
<tr>
<th>Source of Information for Next Smartphone Purchase</th>
<th>Gender</th>
<th>Retail</th>
<th>Online</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Base: All Respondents</td>
<td>2041</td>
<td>1020</td>
<td>1021</td>
</tr>
<tr>
<td>Effective base</td>
<td>1954</td>
<td>981</td>
<td>973</td>
</tr>
<tr>
<td>Recommendation from friends / family</td>
<td>1088</td>
<td>478</td>
<td>610</td>
</tr>
<tr>
<td>Online product review sites</td>
<td>1079</td>
<td>524</td>
<td>555</td>
</tr>
<tr>
<td>TV ad</td>
<td>652</td>
<td>337</td>
<td>315</td>
</tr>
<tr>
<td>Product write-ups in business / tech magazines</td>
<td>597</td>
<td>320</td>
<td>278</td>
</tr>
<tr>
<td>Sales representative</td>
<td>597</td>
<td>320</td>
<td>278</td>
</tr>
<tr>
<td>Tech blogs</td>
<td>510</td>
<td>298</td>
<td>213</td>
</tr>
<tr>
<td>Ad at retail stores (e.g. Best Buy, Radio Shack)</td>
<td>505</td>
<td>236</td>
<td>269</td>
</tr>
<tr>
<td>Social networking sites (e.g. Facebook, Twitter,</td>
<td>461</td>
<td>216</td>
<td>244</td>
</tr>
<tr>
<td>Magazine ad</td>
<td>293</td>
<td>152</td>
<td>142</td>
</tr>
<tr>
<td>Online banner / web site ad</td>
<td>249</td>
<td>137</td>
<td>112</td>
</tr>
<tr>
<td>Newspaper ad (can include circular or insert)</td>
<td>238</td>
<td>124</td>
<td>114</td>
</tr>
<tr>
<td>Trade shows / High-tech product launch events</td>
<td>197</td>
<td>117</td>
<td>80</td>
</tr>
<tr>
<td>Poster, billboard, or other outdoor ad</td>
<td>151</td>
<td>85</td>
<td>66</td>
</tr>
<tr>
<td>Movie theatre ads</td>
<td>145</td>
<td>86</td>
<td>59</td>
</tr>
<tr>
<td>Other, please specify:</td>
<td>59</td>
<td>26</td>
<td>33</td>
</tr>
<tr>
<td>None of the above</td>
<td>135</td>
<td>86</td>
<td>50</td>
</tr>
<tr>
<td>Sigma</td>
<td>8080</td>
<td>4035</td>
<td>4045</td>
</tr>
</tbody>
</table>

Gender Distribution:
- Male: 53.3% 46.9% 59.7% 54.6% 52.0%
- Female: 30.8% 29.6% 34.3% 34.8% 30.1%

Effective base:
- Male: 53.3% 46.9% 59.7% 54.6% 52.0%
- Female: 30.8% 29.6% 34.3% 34.8% 30.1%
CHAPTER 7

DISCUSSION

LIMITATIONS OF THE STUDY

The sample size of 2,040 total respondents is a statistically significant respondent pool and does represent the target market in age demographic and purchasing cycle timing. Statistical power is present in this sample size since using the target variance (N=204) as an estimate to be derived from the sample to be obtained reflects an adequate sample size to eliminate the risk of a null hypothesis. The measure of the study is limited in that the respondents all participated in an online or virtual retail shopping environment which may not yield the same results as an actual in-store shopping experience. In addition, the lack of a retail sales associate (RSA) present at point-of-purchase for the retail environment is also a factor that will vary greatly and will not reflect any marketing training of RSAs that may be completed in conjunction with a marketing campaign. Also, due to the lack of overall Snapdragon brand awareness, the presence of a Snapdragon logo at point-of-sale will not have the same impact as it may in six months from now when awareness campaigns will be in place by Snapdragon and may influence overall awareness or preference for Snapdragon powered devices.

Additionally, the nature of the study relies on self-reported data which could lead to inaccuracies in reporting. Due to the simulated shopping experience, shoppers may have shopped using their aspiration rather than what their actual budget might allow thereby giving us a somewhat inaccurate snapshot of the actual purchase decision made by the shoppers.

The design of the research does allow for a larger sample size and also for the screening and structure of varied cells to compare shoppers’ decisions and have a relevant sample size in each cell. The allowance of some qualitative feedback within the study also adds to the robustness of the survey, providing qualitative results for detailed analysis and responses and feedback from the respondents to better understand their perspective.
THEORETICAL IMPLICATIONS

The key takeaways from the study fall into four major categories. First, the stimuli are most effective when accompanied by a product description that includes a statement of end-user benefits. Essentially, the consumer needs a clear benefit statement that resonates with them and that will ultimately help to influence their purchase decision. Second, the shoppers also needed additional clarification on the differentiation between S1, S2 and S3 Snapdragon processors. Due to the numeric system, shoppers seemed to understand that S3 was the preferred of the three classes of chips, but still were not willing to pay a premium for the higher level processor. Third, shoppers indicated their primary source of influence when making a Smartphone purchase were recommendations from their friends and family and also online reviews. Guidance from a retail sales associate fell to third on the list of influencing factors; however, all three channels should be seen as priorities for delivering product messaging in an effort to increase awareness and preference. Last, it was evident that the exposure to more stimuli had a direct connection with improved Snapdragon Share of Consideration and does impact the opportunity for Snapdragon devices to be selected as the preferred device by the shopper.

The traditional funnel theory suggests that starting at the wide mouth of the funnel, consumers begin to weigh all of their options which ultimately results in the selection of one product and can turn into product loyalty. As tried and true as the purchase funnel theory is, new research suggests that consumers are going around the funnel and have a new way of researching and purchasing products. For example, Amazon.com has developed complicated algorithms for their product recommendation tools that suggest products a consumer might like based on their historical purchases and other consumers’ similar purchases (Vetvik, Court, Elzinga, & Mulder, 2009). Marketing professionals continue to seek those precious moments when consumers are open to a new idea or can be influenced in their purchase decision.

From the research conducted, it can be concluded that ingredient branding is more than just adding a logo to point-of-sale materials and hoping that the consumer notices. As predicted in Hypothesis 2, the subjects were most influenced when provided multiple marketing stimuli. This reiterates that the process of branding a component includes presenting the ingredient as more than just a logo, tagline or advertising campaign. A solid
ingredient branding campaign will deliver a message that will include the value proposition of the component and will speak to the wishes and dreams of the consumer. Whether it’s faster, smarter, better quality or just the magic inside that makes it work better than any of the competition, the consumer will consider the ingredients used to build the product they are intending to purchase and will select their preferred device accordingly.

**Managerial Implications**

For Qualcomm’s Snapdragon brand, this study demonstrates that an ingredient branding campaign follows similar rules as a non-ingredient brand product campaign. In addition, marketing efficacy is highly important for a high-tech brand to ensure that product descriptions and value proposition to mass market adopters are clear, concise and easy to understand. Qualcomm should consider making further marketing investments and should continue measuring marketing effectiveness of stimuli provided at point-of-sale to ensure the messages are being delivered to the desired consumer.

In addition, it is advised that Qualcomm continue to press forward with influencing the key early adopters, or market mavens, who will help proliferate brand value messages via word-of-mouth. Word-of-mouth referral proved to be what consumers rely on most when making a Smartphone purchase; therefore, it is extremely important to reach this audience. These early market adopters will be the key to crossing the chasm and will aid Snapdragon mobile processors to gain awareness with the mainstream consumer.

The other possible implication to consider is how consumers will associate with the Snapdragon brand name and logo. Since the name Snapdragon does not imply what the product is and what benefits it will provide to the end user, the brand messaging and positioning will be fundamental to the success of the ingredient branding campaign. The Snapdragon logo itself also does not provide a visual inference to what the product does and therefore will also require increased awareness and education surrounding the product’s features to ensure that consumers can make an association with the logo and brand name when it is presented at point-of-sale or in advertisements. The name Snapdragon does not have a significant meaning or connection to the mobile processor component, thereby making association especially difficult.
**Future Research Directions**

Future research on this topic should include an analysis of other ingredient brands entering the Smartphone market. With Intel’s presence on the mobile processor scene, it will also be important to monitor their success and the response of early market adopters, bloggers and media and journalists as they compare Intel’s processor capabilities to Snapdragon’s. Closely tracking and monitoring the adoption of competitors’ products and marketing tactics will be fundamental. Learning more about ingredient brand strategies and methods for success outside of Intel’s rampant success in the computer processing industry will also be important. Has ingredient branding changed in the way consumers consider products to purchase? With increased awareness and education, a consumer becomes more powerful and demands more from the product they are purchasing. The ingredients used to make their end-product do begin to matter and play a significant role in the selection process. Future research on the topic should also include an assessment of how granular consumers go in terms of details regarding the ingredient. How much does a consumer need to know to validate the ingredient brand’s value?

In addition, the research should also expand into global marketplaces where the purchase decisions surrounding Smartphones vary greatly. In predominantly post-paid and no-contract markets, the prices of Smartphones are much higher out-of-pocket, thereby requiring a much larger investment up front. In the United States, most phones are highly subsidized and offered at a low price in exchange for signing a long-term contract with the wireless operator. Research into emerging markets where Smartphone penetration is low and the retail shopping environments are different than in the United States will help to generalize results across multiple regions in order to better understand how ingredient branding impacts markets around the globe.

Finally, testing these principles in an actual shopping environment where the subject is able to touch, feel, talk and respond to the stimuli provided in real time will be more accurate than a simulated retail or online shopping experience. Future research should include pre-and post-surveys of Smartphone shoppers to gauge their awareness and purchase intent along with their impressions of the Snapdragon stimuli. This data will be more accurate because it will include an actual purchase process and can measure the consumer’s purchase decision from start to finish.
REFERENCES


APPENDIX A

SNAPDRAGON BRAND ASSETS
APPENDIX B

SNAPDRAGON RETAIL MARKETING STUDY – QUESTIONNAIRE
Snapdragon Retail Marketing Impact Study
Questionnaire

- US General Wireless Consumers
- Intend to shop for new smartphone in next 3 months
- Varied National Representation (by US Census regions)
- Age 18-64
- Primary or joint decision maker for wireless service provider
- Do not work in Advertising / PR, Internet / E-commerce, Marketing / Marketing Research, Publishing, Radio, Telecommunications, Television industries

1. AGE
   - What is your age? (ALLOW 18-64)

2. GENDER
   - What is your gender? (Male or Female)

3. ZIP
   - What is your 5-digit zip code?

4. In which industries or professions do you, or any member of your immediate household, work? Please select all that apply.
   - Advertising / Public Relations
   - Automotive
   - Beauty / Cosmetics
   - Education
   - Electronics / Computer / Software
   - Fashion / Clothing
   - Financial Services / Insurance
   - Food / Beverages
   - Government / Politics
   - Grocery / Convenience / Department Stores
   - Healthcare / Pharmaceuticals
   - Internet / E-Commerce
   - Management Consulting
   - Marketing / Market Research
   - Movie Studio
   - Movie Theater or Theater Chain
   - Music
   - Personal Care / Toiletries
   - Pets (Grooming, Veterinary, Retail, Training)
   - Publishing (Newspaper, Magazines, Books)
   - Radio
   - Real Estate / Construction
   - Restaurants
   - Sales / Sales Promotion
   - Sports
   - Telecommunications (phone, mobile phone, cable)
   - Television (Studio / Network / Cable / Satellite)
   - Toys
   - Transportation / Shipping
   - Travel / Tourism
   - Video Games
   - Other Entertainment
5. Have you participated in any market research surveys on any of the following topics in the past 3 months? (Yes or No)
   If yes, what industry:
   - Mobile phones / smart phones / tablets
   - Mobile phone service providers
   - Laptops and PCs
   - Airline travel
   - Pet food
   - Online dating
   - Gambling

6. Please indicate which of the following products you currently own and use? Please select all that apply.

   - **Smartphone**: A smartphone is an advanced mobile phone with a high-level operating system (e.g. Android, Blackberry, Windows Mobile, iOS, WebOS, Palm OS) used for voice calls, texting (SMS/ MMS), computing/ Internet functionalities like email, web browsing, viewing/editing office documents, entertainment, & GPS/ navigation. Examples of smartphones include Apple iPhone, Blackberry, Motorola Droid, etc.

   - **Feature phone/traditional mobile phone**: A mobile phone is used primarily for voice calling, but may also support additional features/services such as text/picture messaging, email, Web browsing, games, camera, music, video, TV and GPS/navigation. (e.g. Motorola RAZR, LG Chocolate, LG Voyager, Sony Ericsson Walkman, T-Mobile Sidekick, Helio Ocean)

   - **Tablet**: A wireless, portable personal computer with a touch screen interface. Typically smaller than a notebook computer but larger than a Smartphone. Examples include Apple iPad, Samsung Galaxy Tab etc…

   - Smartphone
   - Traditional (basic) mobile phone or Feature Phone
   - Tablet
   - Laptop or notebook
   - Desktop PC
   - 3D TV
   - 3G / 4G cellular USB stick or mobile broadband card
   - Digital camera / camcorder
   - Digital pen (with handwriting capture)
   - Digital photo frame
   - eBook reader (e.g. Kindle)
   - Game console (e.g. Xbox, Wii)
   - Handheld game player (e.g. Nintendo DS)
   - Internet clock radio (e.g. Chumby, Squeezebox)
   - Netbook (e.g. ASUS Eee PC)
   - Portable mobile hotspot (e.g. MiFi)
   - Portable MP3 / media player (e.g. iPod)
   - Portable navigation device (e.g. Garmin, TomTom)
• Smart TV / Internet-connected TV (e.g. Apple TV, Boxee, Samsung Smart TV)
• Wireless (Wi-Fi) router
• Wireless charging device
• Flat panel / Digital TV
• Landline telephone
• Portable Bluetooth speaker
• Bluetooth headset
• BluRay player

7. Please indicate whether or not you plan to purchase any of the following products, and by when you are most likely to purchase each of these.
   • Within the next 4 weeks
   • Within 1 to 3 months
   • Within 4 to 6 months
   • Within 7 to 12 months
   • Within 1 to 2 years
   • After 2 years
   • Do not plan to buy at all

   • Smartphone
   • Traditional (basic) mobile phone or Feature
   • Tablet
   • Laptop or notebook
   • Desktop PC
   • eBook reader (e.g. Kindle)
   • Netbook (e.g. ASUS Eee PC)

8. You mentioned you are looking to buy a smartphone within the next 4 weeks or within 1 to 3 months, what type of smartphone operating system are you most interested in? Please select one.
   • Android OS
   • Apple iOS
   • BlackBerry OS
   • Windows Mobile OS
   • Other
   • Don’t know

9. Where would you most likely purchase your next smartphone from? Please select only the ones that apply.
   • Retail Store
   • Online Store / Website
   • 800 or Toll Free Phone number
   • Other Sources (mail order, catalogue, etc.)

10. How likely are you to purchase your next smartphone from an Online Store?
    • 1 - Extremely Unlikely
    • 2 - Unlikely
    • 3 - Slightly Unlikely
    • 4 - Neutral
    • 5 - Slightly Likely
11. From which of the following stores or websites would you most likely purchase your next smartphone? Select only one.

- Wireless provider (e.g. AT&T, Verizon, etc.)
- Mobile phone manufacturer (e.g. Motorola, Samsung, etc.)
- Mobile phone specialist
- Computer / tech / electronics retailer (e.g. Best Buy, RadioShack, etc.)
- Online Only retailer that sells general merchandise (e.g. Amazon, etc.)
- Online Only retailer that sells tech / electronics only (e.g. TigerDirect.com, etc.)
- Auction Site (e.g. eBay, etc.)
- Department Store
- Discounters (e.g. Wal-Mart, Target, etc.)
- Supermarket or grocery store (e.g. Ralph’s, Safeway, etc.)
- Warehouse store (e.g. Costco, Sam’s Club, etc.)
- Other, please specify:

12. Who is your primary wireless service provider for the mobile phone that you use most often? Select only one.

- AT&T
- Boost Mobile
- Cellular One
- Cricket Wireless
- Metro PCS
- Sprint / Nextel
- T-Mobile
- Verizon Wireless
- US Cellular
- Other, please specify:

13. What was your role in choosing the mobile phone you currently use most often?

- I made the decision on the brand / model
- I shared in the decision on the brand / model I currently use
- I had some influence on the brand / model I currently use
- I had no input on the brand / model I currently use

14. Now please think about the mobile phone you use most often for your personal use. What type of phone is it? Select only one.

- Traditional (basic) mobile phone or Feature Phone
- Smartphone

15. Thinking about the smartphone you plan to purchase, how important is each of the following on your final purchase decision? If any of the following are not applicable for you, please select “Not Applicable.”

- 1 – Not At All Important
- 2 – Not important
- 3 – Somewhat unimportant
- 4 - Neutral
Now we are going to ask you a series of questions about the functions and features you consider as “must-haves” on your next smartphone.

16. Which of the following functions / features do you consider as “must-haves” on your next smartphone? Please select all that apply.

- Speech recognition / voice command
- Touchscreen
- Large display
- Physical QWERTY keyboard
- High-definition screen
- Motion / gesture sensing / vibration feedback
- Glasses-free 3D display
- None of the above
- High quality camera
- High quality speaker / speaker phone
- 3D graphics
- HD (high definition) movies / videos
- Enhanced / HD sound effects
- Video capture capability
- Smart photo / video editing capability
- FM radio
- Live broadcast TV
- Remote control / stream media directly to other devices like TV or stereo
- Flash content support
- Instant photo capture and display (zero shutter lag)
- None of the above
- 3G / 4G faster mobile Internet connection
- GPS / navigation / location aware
- Bluetooth
- WiFi support
- Dual SIM / dual standby / multiple lines in one phone
- PC-like full Internet browsing
- Voice call quality
- Video call / conferencing
- Access to social networking apps / sites
- VOIP capability (e.g. Skype)
- Secure email
- Compatibility with Microsoft applications (e.g. Office)
- eBook reader
- Projecting documents for presentation from phone
- Printing
- Remote access to files on an online storage sites
- Managing / synchronizing calendar
- HDMI port for sending multi-media content to TV / stereo
- Face recognition
- Security features (e.g. data encryption, backup)
- High speed USB port (for faster data transfer)
- Wireless charging capability (e.g. place phone on a base and charge without plugged in)
- Memory / storage
- Battery life
- None of the above

17. Which of the following best describes how you got your primary mobile phone? Select one.
- New phone purchased for the full / regular price
- New phone purchased for a reduced price (e.g. with a contract, rebate, subsidized, promotion)
- New phone gifted to me
- Paid by the employer
- Used phone purchased for a discounted price
- Used phone handed down to me
- Other, please specify:

18. How much did you pay out of pocket for your current primary mobile phone?

Please indicate the price you paid for the phone alone, not including the cost of any service plan which you might have purchased or signed up for along with the purchase of your phone. Please enter a whole number only (do not include a $ sign or a .).

- If your phone was free, please enter 0.
- ____________ Insert dollar amount
19. How much would you pay out of pocket for your **next** mobile phone considering all the features that you are interested in? Please enter a whole number only (do not include a $ sign or a .)

Now, we will take you through a smartphone purchase exercise. Imagine that you are in your preferred store to purchase your next smartphone.

- We would like to show you a product video which you may see if you are in a store.
- We would like to show you a product video which you may see if you are on a website.

- We would like to show you a product description which you may see if you are in a store.
- We would like to show you a product description which you may see if you are on a website.

- We would like to show you a product video and product description which you may see if you are in a store.
- We would like to show you a product video and product description which you may see if you are on a website.

20. How would you rate your overall impression of the following?

- 1 – Extremely Unfavorable
- 2 – Unfavorable
- 3 – Somewhat Unfavorable
- 4 - Neutral
- 5 – Somewhat Favorable
- 6 - Favorable
- 7 – Extremely Favorable

- Product Video
- Product Description

21. Imagine that these phones are displayed one below another, just as you would see them on the website as you make your purchase.

Imagine that these phones are displayed on the shelves right next to each other, just as you would see them in the store as you make your purchase. If you would like to see a phone image more clearly, please hover your mouse over it.

Select the smartphones that you would consider buying for yourself, by clicking the check box right below the phone. Be sure to scroll all the way down to review the full list of phones as you make your selections.

Please be realistic and select only those smartphones you would truly consider buying and paying for. There is no right or wrong answer; we are only looking for your honest opinion.

Now that you are familiar with our purchase exercise, we are going to show you a series of phones you would see on a website.

- Apple iPhone 3GS
- Apple iPhone 4
- BlackBerry Bold 9930
Below are the smartphones that you selected as ones that you would consider purchasing. Please rank each of the smartphones as your first, second and third choice.

Now please think about the actual purchase of your next smartphone.

22. How likely are you to purchase this exact same model of smartphone the next time you buy one?
   - 1 – Extremely Unlikely
   - 2 – Unlikely
   - 3 – Slightly Unlikely
   - 4 - Neutral
   - 5 – Slightly Likely
   - 6 - Likely
   - 7 – Extremely Likely

23. Please describe in detail the possible reason(s) why you may not buy this phone model when you make an actual purchase?

24. Which price option are you most likely to choose for your next smartphone. Select only one.
   - Full / Regular price
   - Subsidized price with a contract

25. Think about the actual purchase of your next mobile phone. Which brand of mobile phone are you most likely to purchase? Select only one.
   - Apple
   - Casio
   - Danger
   - Garmin-Asus
   - Google
   - HP
   - HTC
   - Huawei
   - Kyocera
   - LG
   - Microsoft
   - Motorola
   - Nokia
   - Palm
   - Pantech
   - Samsung
   - Sony Ericsson
   - Danger
   - Garmin-Asus
   - Google
   - HP
   - HTC
   - Huawei
   - Kyocera
   - LG
   - Microsoft
   - Motorola
   - Nokia
   - Palm
   - Pantech
- RIM / Blackberry
- Samsung
- Sanyo
- Sharp
- Sony Ericsson
- UTStarcom
- ZTE
- Other, please specify:
- Do not have a brand in mind

26. Is there a specific smartphone model that you would actually purchase, but did not find included in the store or on the website we just showed you?
   - Yes, please specify model: __________
   - No

27. Did you notice any of the above logos during the smartphone purchase exercise that you just completed?
   - Yes
   - No

28. Did the presence of the logo make a difference in the selection of your smartphone?
   - Yes
   - No

29. Do you think the presence of the logo would have made a difference in the selection of your smartphone?
   - Yes
   - No

30. Please rate how much you agree or disagree with each of the following statements.
   - 1 - Completely Disagree
   - 2 - Disagree
   - 3 – Somewhat Disagree
   - 4 - Neutral
   - 5 – Somewhat Agree
   - 6 - Agree
   - 7 - Completely Agree

   The Snapdragon Logo…
   - Captures my attention
   - Makes me aware that there are different types of processors
   - Makes me aware of Snapdragon
   - Makes the processor matter in my smartphone selection
- Makes me want to learn more about Snapdragon (*research, web search, talk to friends / family, etc.*)
- Makes me select the phone having Snapdragon over others
- Makes me want to purchase a smartphone with Snapdragon the next time I buy one

31. Based on the product description you read earlier, please rate how much you agree or disagree with each of the following statements

- 1 - Completely Disagree
- 2 - Disagree
- 3 – Somewhat Disagree
- 4 - Neutral
- 5 – Somewhat Agree
- 6 - Agree
- 7 - Completely Agree

The Product Description…

- Captures my attention
- Is believable
- Makes me aware that there are different types of processors
- Makes me aware of Snapdragon
- Clearly communicates the benefits of Snapdragon
- Differentiates Snapdragon from other processors
- Helps me identify which one of the three Snapdragon processors (Snapdragon S1, S2 or S3) best meets my needs
- Makes the processor matter in my smartphone selection
- Makes me want to learn more about Snapdragon (*research, web search, talk to friends / family, etc.*)
- Makes me select the phone having Snapdragon over others
- Makes me want to purchase a smartphone with Snapdragon the next time I buy one

32. Based on the video you watched earlier, please rate how much you agree or disagree with each of the following statements.

- 1 - Completely Disagree
- 2 - Disagree
- 3 – Somewhat Disagree
- 4 - Neutral
- 5 – Somewhat Agree
- 6 - Agree
- 7 - Completely Agree

The Product Video…

- Captures my attention
- Is believable
- Makes me aware that there are different types of processors
- Makes me aware of Snapdragon
- Clearly communicates the benefits of Snapdragon
- Differentiates Snapdragon from other processors
- Makes the processor matter in my smartphone selection
- Makes me want to learn more about Snapdragon (*research, web search, talk to friends / family, etc.*)
• Makes me select the phone having Snapdragon over others
• Makes me want to purchase a smartphone with Snapdragon the next time I buy one

33. Which of the following sources of information are likely to influence the purchase decision of your next smartphone? Select all that apply:
• TV ad
• Newspaper ad (can include circular or insert)
• Magazine ad
• Online banner / web site ad
• Poster, billboard, or other outdoor ad
• Movie theatre ads
• Tech magazine ad
• Online product review sites
• Sales representative
• Ad at retail stores (e.g. Best Buy, Radio Shack)
• Tech blogs
• Trade shows / High-tech product launch events
• Ad at carrier store
• Mobile phone / tablet packaging
• Product write-ups in business / tech magazines
• Social networking sites (e.g. Facebook, Twitter, LinkedIn)
• Recommendation from friends / family
• Other, please specify
• None of the above

34. Think about the role of the Sales Representative as you make the final purchase decision of your next smartphone. Which of the following factors would you associate with a sales representative as you think about your next smartphone purchase?

The service representative...
• Makes the experience easier / better / faster
• Provides the information I need to make my own decision
• Help me decide on my purchase / tells me what to buy
• Sells me on a more expensive device
• Helps me save money
• Convinces me on something I had not intended to buy
• Not knowledgeable enough about the products or features
• Helps me decide which devices not to buy
• Could make things more confusing for me
• Could not be helpful at all
• I may not find a sales representative when I need them
• I would not seek out a sales representative
• Other, please specify:

35. Before today, how familiar were you with mobile processors in general?
• 1 – Not At All Familiar
• 2 - Unfamiliar
• 3 – Slightly Unfamiliar
• 4 - Neutral
• 5 – Slightly Familiar
• 6 - Familiar
36. Which of the following best describes your knowledge of the following mobile processor brands before today?

- Currently use this brand of mobile processor
- Have used this brand of mobile processor in the past
- Know a lot about it, but have never used this brand of mobile processor
- Have heard a few things about this brand of mobile processor
- Have only heard of the name of this brand of mobile processor
- Never heard of this brand of mobile processor before today

- Snapdragon
- Atom
- Exynos
- OMAP
- Tegra
- A4 / A5

37. How important is the processor when shopping for your next smartphone?

- 1 - Not At All Important
- 2 - Unimportant
- 3 - Somewhat Unimportant
- 4 - Neutral
- 5 - Somewhat Important
- 6 - Important
- 7 - Extremely Important

We are now going to show you the description of Snapdragon processors. Please take a few minutes to review. After you have finished reviewing, we would like you to answer a few questions related to it.

Please rate how much you agree or disagree with each of the following statements.

- 1 - Completely Disagree
- 2 - Disagree
- 3 – Somewhat Disagree
- 4 - Neutral
- 5 – Somewhat Agree
- 6 - Agree
- 7 - Completely Agree

Product description…..

- Captures my attention
- Is believable
- Makes me aware that there are different types of processors
- Makes me aware of Snapdragon
- Clearly communicates the benefits of Snapdragon
- Differentiates Snapdragon from other processors
- Helps me identify which one of the three Snapdragon processors (Snapdragon S1, S2 or S3) best meets my needs
- Makes the processor matter in my smartphone selection
• Makes me want to learn more about Snapdragon (research, web search, talk to friends / family, etc.)
• Makes me select the phone having Snapdragon over others
• Makes me want to purchase a smartphone with Snapdragon the next time I buy one

Please provide any suggestion you might have on how to improve the description of the Snapdragon processor series to make it more helpful or relevant for you. Please describe in detail.

38. Considering all that you now know about Snapdragon processors, which of the following would you most likely prefer for your next smartphone? Please select one.

Click here if you would like to review the product description again before making your selection.
• Snapdragon S1
• Snapdragon S2
• Snapdragon S3
• Other, please specify:
• I do not care about the processor brand

39. Think about the amount you have planned to pay to purchase your next smartphone. How willing are you to pay an additional $___ to have a (S1, S2 or S3) processor inside your next smartphone?

• 1 – Not At All Willing
• 2 – Unwilling
• 3 – Somewhat Unwilling
• 4 - Neutral
• 5 – Somewhat Willing
• 6 - Willing
• 7 – Extremely Willing

40. How willing are you to pay an additional $________ to have the more advanced (S1, S2, S3) processor inside your next smartphone?

• 1 – Not At All Willing
• 2 – Unwilling
• 3 – Somewhat Unwilling
• 4 - Neutral
• 5 – Somewhat Willing
• 6 - Willing
• 7 – Extremely Willing

Now, we would like you to answer a few questions around the mobile phone you currently use most often.

41. Please select the brand of your “primary” mobile phone. By primary mobile phone, we mean the mobile phone you use most often for your personal use. Select only one.

• Apple
• Casio
• Danger
• GarminAsus
• Google
• HP
• HTC
• Huawei
• Kyocera
• LG
- Microsoft
- Motorola
- Nokia
- Palm
- Pantech
- RIM / Blackberry
- Samsung
- Sanyo
- Sharp
- Sony Ericsson
- UTStarcom
- ZTE
- Other brand, please specify:
- Don’t know
42. What is the operating system of the smartphone you currently use most often? Select only one.
   - Android OS
   - Blackberry OS
   - Apple iOS
   - Linux OS
   - Palm OS
   - Symbian OS
   - Windows Mobile OS
   - Windows Phone OS
   - Other, specify:
   - Don’t know

43. For the wireless service plan on your primary phone, is it…? Please select one.
   - Pre-Paid
   - Post-paid / monthly subscription at flat / fixed fee
   - Post-paid / monthly subscription based on usage

Now, we would like you to answer a series of questions around **what you plan to do with your next smartphone.** From the following list, select all the activities that you would plan to do with your next smartphone:

From the following list, select all the activities that you would plan to do with your next smartphone:
   - Make phone calls (voice calls)
   - Text messaging / SMS
   - Multimedia messaging / MMS (e.g. photo, video)
   - Instant messaging (IM) / chatting (e.g. MSN / Yahoo Messenger, GTalk)
   - Use VOIP (e.g. Skype) for voice calls
   - Make video calls
   - Check / write e-mail
   - Twitter or micro-blogging
   - Upload / Share photo / video on social networking sites such as Facebook and others
   - Check / post to social networking sites such as Facebook and others
   - None of the above
   - Listen to downloaded songs / audio books / clips
   - Listen to streaming music / audio clips / radio / podcasts (e.g. Pandora)
   - Listen to FM radio
   - Watch downloaded videos / movies
   - Stream videos / TV shows / movies
   - Watch live broadcast TV (e.g. sporting events, breaking news)
   - Play games that are pre-installed or downloaded
   - Play online games
   - Take photos / videos
   - Stream music / video / photo directly to TV / stereo
   - Search for information
   - Browse websites
   - Download / buy apps / content (e.g. ringtones, wallpaper, songs)
   - Check / read news / RSS
- Check weather
- Shop online
- Check / trade stocks
- Check bank balances and pay bills
- Use GPS based services
- Personalize phone (e.g. change User Interface, Settings, Themes)
- Use Wi-Fi to get Internet access
- Use Bluetooth for calls / content transfer
- Automatically back up data / sync with other devices
- Use MiFi device to connect phone to Internet (MiFi is a device that creates a portable mobile hotspot)
- Use phone as a hotspot to access Internet on other devices
- Side-load content / apps (transferring files to a mobile device via memory card / USB port)
- Use productivity or work related software (e.g. Microsoft Office)
- Remotely access files from desktop, or from an online storage site (e.g. Google Docs)
- Check / edit / synchronize calendars
- None of the above

44. Considering the mobile service fees for your next smartphone, which of the following would you prefer the most?

- Pre-Paid (no contract)
- Post-Paid (monthly contract)

45. Considering the mobile data services you would plan to use on your next smartphone, which of the following service plans would you most likely choose?

- Pay per use, based on amount of data used
- Pay per use, based on time / session
- Monthly flat rate for a certain data limit without a contract
- Monthly flat rate for unlimited data without a contract
- Monthly flat rate for data with a 12-24 month contract and new mobile phone discount
- Monthly flat rate for data with a 12-24 month contract and service fee discount
- Monthly flat rate for cell phone data service bundled with mobile broadband connection for laptop
- Monthly flat rate for cell phone data service bundled with other services such as fixed telephone, cable TV and Internet
- None, I do not intend to pay for wireless data service
- Other, please specify:

46. Which wireless service provider are you most likely to choose for your next mobile phone?  
*Please select one:*

- AT&T
- Boost Mobile
- Cellular One
- Cricket Wireless
- Metro PCS
- Sprint / Nextel
- T-Mobile
- US Cellular
47. Please read the statements below and mark the ones that you believe describe you. Please select all that apply.
- I am always the first to adopt the most cutting-edge gadgets / technologies
- I only choose technology products that are easy to use
- Convenience is everything for me – even if I have to pay more
- I always need to get the most value for every penny I spend
- People all come to me for advice on technologies and devices
- Being connected to the Internet anytime, anywhere I go is a must for my life
- I am willing to pay a premium for design, style and brand
- I wait until the second generation or for more people to use a new product before getting it
- I need to keep in touch with my family / friends at all times
- My life is all about having fun
- I have “jailbroken” a phone to get around operating system restrictions
- I have streamed video from my PC, phone or media server to my TV
- I have backed up data using a paid cloud storage service (such as CrashPlan, Carbonite or Mozy)
- I have posted comments on highly technical websites (such as Slashdot or iFixit)
- None of the above

We will now ask you a few questions about yourself.

48. During a typical day, how much of your time do you spend mobile / out and about, traveling or working away from your office / desk?
- 0-25%
- 26-50%
- 51-75%
- 76-100%
- Don’t know / Not sure / Prefer not to say

49. Which of the following best describes your employment status?
- Employed full time
- Employed part time
- Self-employed
- Student
- Homemaker
- Retired
- Unemployed
- Prefer not to say

50. Which of the following best describes your primary occupation?
- Professional & Technical positions (e.g. doctor, lawyer, accountant, architect, teachers, engineers)
- Executive & Managerial positions
- Marketing & Sales (e.g. cashiers, real estate agents, other salespersons)
- Administrative Support positions (e.g. clerks, secretaries)
- Service positions (e.g. cleaners, chefs, nurses, barbers, police, firefighters)
• Mechanics, Installers, & Repairers
• Construction Trades positions
• Production / Manual Workers
• Transportation & Material Moving positions (e.g. truck drivers, parking valets)
• Small / Mid Business Owner / Partner
• Military
• Other, please specify:
• Prefer not to say

51. What is your marital status?
• Married or living with a partner / significant other
• Widowed, separated, or divorced
• Single, never married
• Prefer not to say

52. Do you have children under the age of 18 living in your household?
• Yes
• No

53. What is the highest level of education you have completed?
• Grade school or less
• Some high school
• High school
• Technical / trade / vocational school
• Some college / university
• College / University
• Post graduate school
• Prefer not to say

54. Which of the following best describes your total annual household income before taxes?
• Less than $25,000
• $25,000 - $34,999
• $35,000 - $44,999
• $45,000 - $59,999
• $60,000 - $74,999
• $75,000 - $99,999
• $100,000 or more
• Prefer not to say

This is the end of the survey. Thank you for your time and participation.