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Informative Speech Outline

## High Definition Televisions

**General purpose:** To inform.

**Specific purpose:** To explain what high definition televisions are all about, including resolutions, screen types, and sources.

**Central Idea:** By informing my audience about high definition televisions, including informing them about the various resolutions, screen types, and sources, they will feel more confident when they make high-definition television purchase.

### Introduction

- I. Good afternoon my name is Andrew Bertino. Let me begin with a question. By a show of hands, how many of you own a high-definition television? [Analyze audience and comment on how many or how little hands are up]. Whether or not you own an HD-TV, we have all probably had the following experience. You are at Best Buy or Circuit City to maybe pick up a new DVD or a CD and you just happen to stroll over to the television section. There you find a plethora of televisions, all different sizes, shapes and colors. You then begin looking at all of the numbers being thrown around on the information cards and you freak out and walk away. You were overwhelmed by all of the types, numbers and confusing technical jargon. I have been there. When I began looking at buying a high-def television, I was overwhelmed. By researching, I was able to make a sound purchase when I bought my Samsung 40” LCD 1080p with 15000:1 contrast ratio. [Laugh] I lost most of you didn't I?

That is exactly the problem with high-definition. Even though it has become popular and is advertised for non-stop, the highly technical information scares away the average consumer. According to the Consumer Electronics Association, only about 30% of households in the United States have a high definition television (Raby, 2007). HD-TVs have been around for roughly a decade and still only 30% of the households have them. I feel this has a lot to do with the lack of knowledge and understanding of the terminology. These technical terms just scare off most of the population. Therefore, today I will tell you about some of the main things regarding HDTVs that should help you when you go to buy a high-definition television.

I will first speak about the resolutions that make up high-definition and I will explain what makes them different from standard definition. Secondly, I will discuss the various types of high-definition televisions such as LCD, Plasma and DLP and I will give a few pros/cons of each. Finally, I will discuss some of the high-definition

sources that make high-definition even possible. Without these sources, HDTVs would be irrelevant.

**Transition 1** – With that said, I will dive right into my first point. Let’s take a look at some resolutions.

## Body

- I. So what makes high-definition well high-def? High-definition is a clearer and sharper picture because it has a higher resolution, meaning it has more pixels displaying across the screen, increasing clarity. In fact, according to David Katzmaier of CNET.com, “Resolution is the main reason why HDTV looks so much better than standard television” (Katzmaier, 2006). When looking at high-definition televisions you might see all those weird numbers they place directly on the television? You commonly see the words 720p or 1080p on stickers directly on the television, but what exactly do those mean? These numbers are basically representations of the resolutions that make up high-definition.
  - A. First before you can understand what resolutions make up high-def I have to explain what the resolutions mean exactly and what standard definition is. [Show PPT Slide 1]
    1. The televisions we grew up with, and most the televisions still around are still standard definition. Standard-definition is 480i. The 480 stands for the number of vertical lines used in the picture. The lower case i stands for interlaced, which means that a line of the picture is rendered then one is skipped and then another line, coming back to fill in the rest. For example it would render line 1,3,5,7 etc and then go back and fill in 2,4,6,8, etc. This renders the resolution of 720 (horizontal) x 480 (vertical) which is the resolution for standard definition. Now there is also 480p, where the only difference is the p, which stands for progressive scan. This renders the vertical lines differently. With progressive scan it renders each line in sequential order. So it renders 1,2,3,4 etc and does not go back. This increases clarity slightly, but this is still not high-definition, 480p is called enhanced-definition.
  - B. So now we know what standard-def is, so let’s look at the high-definition resolutions. There are 3 types of high-definition resolutions.
    1. There are 720p, or 720 vertical lines using progressive scan, then there is 1080i and 1080p, with 1080p being called “true” high-definition. 720p has a resolution of 1280 x 720, which is a wide-screen resolution, all HD resolutions are widescreen. 720p is the most common high-definition resolution. 1080i is actually available in most 720p televisions and is slightly better running at a resolution of 1920 x 1080 but is interlaced. Finally, there is true high-definition 1080p which runs at 1920 x 1080. These resolutions are the key factor of high-definition televisions. They are what make up high-def. Although 1080p is true high-definition 720p is not always worse, and it really becomes a cost thing when deciding what

resolution to choose from as all three of these will look far superior than standard definition.

**Transition 2** – Now that we have looked at resolutions, let me go to my second section. Let us look at the different types of televisions. [Show slide 2]

- II.** There are many types of HD televisions. There are different sizes and types. There are still some HD CRTs (cathode ray tube) but most are LCDs (liquid crystal displays, Plasma televisions, or DLP (digital light processing). Each has their own pros/cons and is a key thing to look at when buying an HD-TV.
  - A. The early high-def televisions were mostly CRTs. This is still the most common television used.
    - 1. CRTs are tried and true and have been around the longest. They have no major flaws except that they are generally heavier and do not usually have too many high-definition sets anymore. They are not as bright, sharp or clear as the other televisions. CRTs will slowly fade away. You may find some cheaper CRT HD-TVs left, but they are far inferior to the other types. However, since it has been around the longest, people are not as willing to just let go of the CRT.
  - B. LCDs are another type of television. This is becoming very popular as a lot of desktop monitors use them as well.
    - 1. The LCD is lightweight and is clearer and sharper than the CRT. They come in all ranges of sizes, which the others do not. They are bright, but not as bright as the Plasma television. They also do not do blacks very well, they don't render the color black as black all the time. LCDs also have some viewing problems. Depending on that the angle that you look at, the picture may start to distort making it hard to see. LCDs also have dead pixel problems where dots in the television will die and all you will see is a black dot for the life of the television. LCDs sometimes tend to blur or ghost with fast motion as well, but only in older LCDs. LCDs however have an advantage as most do not just act as a television, but as a monitor for your computer as well.
  - C. Then there are the Plasma televisions. These generally run in higher sizes and are slightly heavier than the LCD.
    - 1. Plasmas are the brightest and do blacks very well. They do not have as many viewing angle issues as the LCD and do not have dead pixel problems like the LCD. However, the Plasma televisions brightness tends to fade over the life cycle of the television, something the LCDs do not do. Also, with Plasma televisions there are chances for burn-in, where a stationary image may stick to the television and never go away. This is something old CRTs did, but some Plasma still have problems with burn in,
  - D. Finally there are projection televisions that use DLP.
    - 1. Finally there is DLP. This is a projection television system that uses a series of mirrors to show the picture. DLPs are very bright and provide very large high definition pictures. However, there is a certain rare

problem with the way the mirror works. With some people when looking at DLPs they will see a line of colors, this effect is known as the rainbow effect, but most newer DLPs are removing these problems.

**Transition 3** – Now I will move to my final section. I will talk about the different sources of high-definition.

- III.** The high definition television is nothing without the sources. A lot of people get high definition television both get no broadcasting Let us look at some of the main sources.
- A. First there are high-def broadcasts.
    - 1. Comcast, DirectTV all offer their HD package which include several HD channels such as ESPN HD, the Local stations, and Discovery HD. The local stations can actually be received by an antenna plugged into your HD televisions if it's capable. Most of these broadcasts are in 720p and some are in 1080i, but not television broadcast is in 1080p. This is what most people use high definition televisions for, watching high def from a cable box, watching sports in HD. This is really the main source of HD. However, according to surveys done by Scientific-Atlanta 56% of the people who buy HDTVs have no high-def source from a cable-box, satellite, or antenna (Davidson, 2005).
  - B. Now there are video game consoles that also output high-def signals.
    - 1. The Xbox360 can output video game signals in 1080p, but most games are designed for 720p. The PS3 also offers 1080p with some of the games actually being developed to play in 1080p.
  - C. Finally there are HD-DVD players and Blu-Ray.
    - 1. The PS3 has a Blu-Ray player and the Xbox 360 has an HD-DVD accessory or you can get these standalone. Both offer sharp and crisp 1080p true high-definition movies. I have to say that they are far superior to standard DVDs, but I can't say that Blu-Ray is better than HD-DVD, as to me they look the same.

**Transition 4** – That will pretty much wrap it up.

**Conclusion** - I have covered a lot of technical topics that will hopefully let you better understand HD-TVs. I have talked about the resolutions that make up HD, the different types of televisions, and the sources that use HD. There are many things to look at when buying HD-TVs, but by knowing about these main things you will have a better understanding and will be able to make a sound decision. There are also many other things I did not cover that are also important, but the things I discussed today are key things to look at. So the next time you are in BestBuy or Circuit City, you can walk into the television section with pride, knowing that the numbers flying around can't scare you.

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