

3D Television

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### Abstract

DIRECTV, who partnered with Panasonic, will launch the first 3D channels nationwide this year. Starting in June, millions of DIRECTV customers will receive a free software update that will include three channels. These channels will consist of a Pay Per View, an on DEMAND and a 3D sampler channel. In order for customers to view these channels, they will need to purchase a 3D compatible television. On June 11<sup>th</sup>, ESPN 3D will be the first network to air in 3D when they broadcast the first game of the 2010 World Cup. ESPN 3D will also televise a minimum of eighty five sporting events this year. DIRECTV is currently working with NBC and CBS to bring 3D to broadcast networks but it might take years before 3D programs being produced locally. All televisions come with at least one pair of glasses that sync with the television. These battery operated glasses capture the picture frame by frame allowing the brain to create a 3D sensation. The government won't mandate any transition to 3D television, so its popularity will be dependent on how well society embraces this new technology.

### 3D Television

This year, millions of people will be introduced to the newest innovation in 3D technology, television. For over one hundred and fifty years, society has been intrigued with 3D imagery. In 1838, Sir Charles Wheatstone created the first 3D image with a device called a Stereoscope (Bowers, 2001). This gadget used a prism that sat in between two identical pictures and projected a 3 dimensional image as a result. At the British Association meetings, the stereoscope was received enthusiastically but for scientific reasons only. The development of photography would later develop the interest in using the stereoscope for popular and commercial use (Bowers, 2001). 3D images and movies gradually became popular throughout the 20<sup>th</sup> century and now 3D will be taken into the next generation with the introduction of 3D television.

#### **DIRECTV**

On January 6, 2010 DIRECTV and Panasonic partnered up and announced that they will bring 3D television to the largest audience nationwide (DIRECTV, 2010). Beginning in June of 2010, millions of DIRECTV customers will receive a free software upgrade that will allow them access to three 3D channels if they have purchased a 3D compatible television. These channels will consist of a Pay Per View channel, a 3D DIRECTV on DEMAND channel and a free a 3D sampler demo channel called N3D. N3D will be powered by Panasonic and will feature different programming such as sports, movies and other content. All of these channels will be offered twenty-four hours a day, seven days a week. Panasonic will be the exclusive sponsor for DIRECTV and will be branded on all DIRECTV channels for the first year. Currently, DIRECTV and Panasonic are working to ease relationships with programming partners and movie studios to obtain new and current 3D content. DIRECTV is working with companies such

as AEG/AEG Digital Media, CBS, Fox Sports/FSN, Golden Boy Promotions, HDNet, MTV, NBC Universal and Turner Broadcasting System, Inc., to develop additional 3D programming that will debut in 2010-2011 (DIRECTV, 2010).

### **ESPN3D**

Launching in June, ESPN 3D will be the industry's first 3D television network. George Bordenheimer, President of ESPN and ABC Sports stated, "ESPN 3D marries great content with new technology to enhance the fan's viewing experience and puts ESPN at the forefront of the next big advance for TV viewing" (ESPN, 2010). At no additional costs DIRECTV customers, who have already subscribed to ESPN, will receive ESPN 3D which will showcase a minimum of eighty-five live 3D sporting events this year. On June 11<sup>th</sup>, the first game of the 2010 FIFA World Cup, South Africa versus Mexico, will be aired in 3D and it will be the first of up to twenty five World Cup matches in the channel's 3D lineup. Other sporting events that will be produced in 3D will include the X Games this summer, college football including ACC Championship game, the BCS National Championship game and various college basketball games in 2011 (ESPN, 2010).

### **BROADCAST CHANNELS**

DIRECTV is currently working with NBC and CBS to bring 3D content to broadcast channels. The possibility of having 3D programs produced at the national level is well in reach within the next year but is a different story for production at the local level. David Johnson, from WFAA in Dallas, explained "I do not know what the networks like ABC are planning, at the local level it could be years before you see any locally produced 3D programming. This transition will be mandated by the consumer and not the government, so the marketplace will determine the speed of the transition. We did see a presentation by Sony showing new 3D

production equipment that will reduce the cost of producing original 3D programming” (Johnson, 2010). As the government mandated the transition from analog to digital last year, there won't be a transition to 3D. The popularity of 3D television will be determined by how well society accepts the new technology.

### **3D TELEVISIONS AND GLASSES**

To be able to view any type of 3D content from DIRECTV, at home, the consumer must purchase a high definition 3D television. It's estimated that one million 3D televisions are going to be sold worldwide this year. As of now, Panasonic is sold out of all televisions. Sony has 40” and 52” televisions that are selling for \$1,099.99- \$2,969.99 (Sony Televisions, 2010). Samsung has a variety of 40”, 46” and 55” televisions that range from \$1,999.99- \$4,499.99 (Samsung Televisions, 2010). With the purchase of any of these televisions, the customer will receive at least one pair of 3D glasses. These glasses are battery operated and sync with the television through a shutter system and can be purchased separately. Panasonic has one model, the TY-EW3D10U, and it will cost \$149.95 each (Panasonic Glasses, 2010). Sony has two models, the TDG-BR100 and TDG-BR50, which both cost \$133 (Roach, 2010). Samsung has developed three different 3D glasses. The SSG-2100AB costs \$149.99 and the SSG-2200AR costs \$199.99. Samsung has also developing special 3D glasses for kids. This model, SSG-2200KR, costs \$179.99 (Samsung Glasses, 2010).

### **HOW 3D TELEVISION WORKS**

The televisions and glasses work together through a frame sequence method to bring the 3D experience into homes. Images are separately recorded, for the left and right eye, with 1920 x 1080 full HD quality and are alternatively played at 120 frames per second. When wearing the 3D glasses, the left and right lenses are timed to be in sync with the images being shown on the

television. The right lens, of the glasses, opens and closes to capture the right image only while the left lens only captures the left image. This “shutter” effect creates a 3D realism that brings cinema-level pictures to your home (Panasonic, 2010).

## **CONCLUSION**

The introduction of 3D television will bring a new and more exciting perspective to the way we watch TV. It’s only a matter of time before we truly see the significance that 3D television will have on our society. Will 3D television be the new standard for viewing our favorite movies, sitcoms and sports? Or will it fade away and disappear? As stated before, it is up to the consumers to determine if 3D television will be successful or a failure. It took ten years for majority of American households to own a color television after it was introduced and it might be the same with 3D TV. In my opinion, I think 3D television will eventually be a part of our everyday life, but not anytime soon.

One of the reasons why 3D television will take years to become popular is that the cost of having to watch it is too expensive. The consumer has to be a DIRECTV subscriber, has to buy a new television and if they need to buy extra glasses, they will have to pay for those separately also. Another reason why 3D television won’t take off so quickly is that there is little content. As of now, there are the three DIRECTV channels with the addition of a few cable channels such as ESPN 3D and Discovery. This will also discourage society for spending more for very little. One last reason why it may take years for 3D televisions to become the standard in TV is that consumers are satisfied with high definition. As new 3D televisions are being introduced, people won’t have to deal with buying a more expensive 3D TV when they can be happy with HDTV that is cheaper. Consumers won’t have to deal with wearing glasses all the time or the hassle that comes with them as far as breaking or even losing a pair.

Even though 3D television might not take off as quickly, there are still those, such as innovators and early adaptors, who will still purchase this new technology. For those who won't have access to 3D TV at home, there are talks of having special showings and sporting events at movie theaters. Even though I feel like 3D television might take years before it becomes popular, it will be interesting to see how much of a role it will play in the future.

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