

3d technology in television



Nowadays there are many companies and educational establishment which have expressed a deep interest in 3D television. 3D technology lends itself very nicely to a number of different markets including walk through of houses in the real estate market. It can also offer high quality, realistic training in other industries such as construction, mining and government institutions. The advantage of this technology is that it shortens the learning curve and retention of the people who uses it. How incredible would it be if the medical industry can use 3D technology in their TV monitors during surgery?

This thesis paper will concentrate mainly on the development that we observed in the past and to bring out ideas related to justify the role of three dimensional technologies in television and cinema especially.

1. 1 Thesis Statement

3D is the technology of the future for television and cinema

1. 3 Ethical Issues

Some ethical issues might be involved when carrying out this research. These issues are related to the characteristics of qualitative methodology which usually include long-term and close personal involvement and while extracting some data. It can be due to Truthfulness, openness, confidentiality and fidelity, copy right infringement. It can be further demonstrated as follows:

CHAPTER 2

Literature Review

2. 1 A Brief History of 3D

The idea of using 3D images for movies and television has been around for quite some time. In fact, the technology dates from the late 19th century and the first 3D movie was actually shown in 1922. There have been various periods over the years where 3D movies and television became popular for short periods, such as during the 1950's in America, but it has never taken off and remained mainstream.

In the 1980's there was another craze for watching movies in 3D, and a number of releases such as Jaws 3-D used this technology.

The way it worked in those days was that we had to wear a cheap pair of cardboard 'glasses' while we watched the movie, and these had a red lens over one eye and a cyan lens on the other side. Coupled with a special stereoscopic filming technique, the glasses enabled the image on the movie screen to appear to have a 3D effect. We were able to see a depth to the image as some objects appeared nearer than others.

There were always a few special effects throughout the movie where something would leap out from the screen and make us jump. Oh yes, we really knew how to enjoy ourselves in the old days!

However the demand for 3D gradually faded and, although it never disappeared completely, 3D images have usually been seen as an interesting gimmick rather than a proper alternative to 2D images. And why did it fade

away? Well, because it was a bit rubbish really. It never really looked that good and often just gave viewer a headache.

So 25 years after the last 3D craze, here we go again. 3D is all the rage and it's time to get viewer 3D specs out once more. Even though the technology has developed over the years (aided by the introduction of digital technology), the most common forms are still based around the principle of wearing a special pair of glasses in order to see the 3D effect.

3D in Cinema

A passive 3D system using polarized glasses is the type most often used in cinema – the most common system being RealD Cinema. This method provides an effective 3D effect and polarized glasses are relatively cheap to make, and so it is the most cost-effective way of providing 3D to large audiences.

However, there are alternative 3D systems currently being used in cinemas around the world such as Dolby 3D, XpanD 3D, MasterImage 3D and IMAX 3D – all of which use slightly different methods to create a similar 3D effect.

3D in the Home

For 3D images in our homes, many manufacturers are going to be using frame sequential 3D in their HDTVs. Many of the new 3D flat screen TVs will use this active 3D technology and this will require us to buy the more expensive active shutter LCD glasses.

The main advantage of active 3D systems is that they will deliver Full HD 1080p images to each eye, whereas other methods will have to rely on lower resolutions.

However, some TV models will use passive 3D with the cheaper polarized glasses, The two technologies will have certain advantages and disadvantages

Existing 3D Technology

Some people might be confused by all this talk of ‘ new’ 3D TVs when they have been watching 3D on their old televisions for years. The difference is that they would have been using the older anaglyphic 3D, or possibly field-sequential DVDs which worked on old CRT televisions.

Anaglyphic 3D can be seen on any TV as it is created by displaying a picture with two colour-filtered images super-imposed on each other. When viewed with good old red and cyan lens glasses, a 3D image is seen. However, anaglyphic 3D isn’t as accurate as digital frame sequential/polarized 3D, which provide sharper 3D images with more accurate colours. So all the recent talk about 3D TV in the home is referring to ‘ new and improved’ 2010-style frame sequential or polarization 3D.

CHAPTER 3

Methodology and Research Design

3. 0 Research Methodology

The research methodology is the philosophy or the general principal which guide to research. Research methodologies deferent from research method. Research methods are the tools that use to gather data such as questionnaire, interviews, focus Group, Observation, Experiences, and Schedules etc. The research methodology can be categorized based on quantitative research and Qualitative research.

The research methodology is used for this study is

3. 1 Data Collection Method

3. 1. 3 Documentation Reviews

Other data collection method was Archival documentation. It s a part of secondary data collection method. Archival data was obtained mainly referring journal articles, web articles and text books. Other documentation included organizational charts, policy and procedure documents, Press Releases, and Web Sites.

CHAPTER 4

Data Analysis & Discussion

4. 0 Introduction

Data analysis and discussion based on the argument for and against on the thesis topic and where these arguments are supported by several facts which gathered from various sources.

4. 1 Facts which are supporting thesis title

4. 1. 1 High-tech movie experience

The greatest buzz at CES (Consumer Electronics Show in Las Vegas) was elicited by a whole crop of new HDTVs with 3D capabilities. The motion picture industry and the movie theatre chains are increasingly turning to 3D and IMAX as ways to lure audiences into theatres, and the current success of James Cameron's Avatar demonstrates that even in a serious global recession, moviegoers are willing to pay extra for a high-tech movie experience they can't get at home.

The new 3D TVs, including the Panasonic TC-PVT25 series that won the Best of CES award this year, promise to provide an in-home 3D experience for only a few hundred dollars more than ordinary HDTVs. In addition, satellite television provider DirectTV announced at CES that it has teamed with Panasonic to create three HD 3D channels, to launch this spring. Working with media partners including NBC Universal and Fox Sports, DirectTV will offer a pay-per-view channel, an on-demand channel, and a free sampler channel, all in 24-hour 3D and compatible with the current generation of sets.

Like the original HD offerings in the mid-1990s, which focused on sports events and video from space missions, the new 3D channels will offer existing 3D movies, 3D upgrades of traditional 2D movies, and sports.

4. 1. 2 High sale on 3DTV

As with anything, there are sceptics who are doubting whether 3DTV will take, particularly with the global recession. However, people will always buy

what they want and not what they need, and manufacturers are struggling to keep up with the growing demand.

Those people who have invested in HDTV sets recently may not want to spend the money to upgrade immediately. However, for those people who haven't yet made the leap to HD may want to skip high definition and jump straight to 3D television.

Samsung, a big manufacturer of 3D televisions, has forecast a big increase in sales of 3D TV's, estimating they will ship 45-50 million units in the next few years. This company has produced flagship 50 inch models priced as high as \$2000.

All of the big television manufacturers are releasing 3D TV's in a wide range of format, namely liquid crystal (LCD), light emitting diodes (LED) and plasma display panels (PDP). This has the advantage of providing a wide range of price points for 3D TV's as well as addressing a variety of different preferences.

There is a lot of hype surround HD and 3D technology which has sparked the public's interest. This, combined with the huge releases of 3D movies at the cinema, have brought 3D technology to the forefront of the public's attentions.

Many people are avidly watching the development of 3D TV and watching the price points waiting for it to become more affordably. However, there are many people to whom the price of the televisions is minimal and they'll find

a way to enjoy this new technology in their home to impress their friends and family.

Consumers electronics major Sony has an impressive line up of 3D TVs comprising of eight different models which they have made available in Japan and sport a starting price tag of 200, 000 yen or about 2, 200 dollars for a 40 inch screen sized 3D TV. They also have firmed up plans for the launch of 3D titles for its PlayStation 3 games console. For Akira Shimazu, who is the senior general manager at Sony overseeing the company s 3D projects, 2010 is the year which he believes will be when the immersive viewing experience will finally come of age.

In terms of technology, it was impossible for television sets and video players at consumers houses to play back 3D content appropriately, Akira Shimazu, senior general manager at Sony

Also, the football World Cup being held in South Africa is the first that has being filmed and broadcast in 3D by Sony at six designated FIFA viewing sites in cities around the world.

4. 2 Facts which are not-supporting thesis title

4. 2. 1. Inconvenience to the viewers

The greatest usability issue is the need for viewers to wear glasses. While there are experimental technologies that work without glasses, today if you want to experience high-quality 3D television images you need to wear pricey shutter glasses. Unlike the polarized glasses patrons wear at theatres, shutter glasses respond to signals from the TV, directing alternating frames

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to alternating eyes. The glasses are expensive only Panasonic is promising to provide a pair with your TV purchase, and additional pairs will run around \$50. At least one manufacturer is already offering lighter, more fashionable, more expensive replacement glasses.

And wearing special glasses while watching TV at home is not conducive to the average person's lifestyle. As Microsoft exec Aaron Greenberg told GameSpy at CES, when I play games or watch TV, I've got my phone, I've got all kinds of things going on I get up, I get down, I'm looking outside at the weather I'm not in a dark theater, wearing glasses, staring at a screen. You cannot walk around comfortably wearing modern shutter glasses, and just happen to be wearing them when you want to watch TV. Until 3D TVs don't require glasses, consumers are going to have trouble integrating 3D television watching into their lives.

The new 3D TVs also suffer from varying levels of picture clarity and a pronounced flicker, although these issues are expected to disappear as the technology improves. More importantly, 3D media demand changes in how movies and television are produced. Right now, only computer animated films are expressly produced with the needs of 3D in mind, producing stunningly realistic depth-of-field and fine gradations of perceived depth. Film and video produced according to the traditional rules of 2D creates flat, paper-thin figures moving in a 3D environment that can appear shallow or truncated. Sports coverage, intended to be a killer app for 3D TV, particularly suffers from these issues, and 3D broadcasts of sporting events may require drastic changes to the technology used on the field.

Filmmakers are still learning how to deal with changing depth of focus. In the real world, the viewer chooses unconsciously where to focus their eyes; but in a 3D production this decision is made for the viewer. A plane of focus that appears to constantly shift can give audiences headaches and eye strain. A largely different language of cinema is being developed, to produce content in which 3D is a core component rather than a faddish trinket.

4. 2. 2 All viewers are unable to grab maximum experience of High-tech movies

CNN Tech reports that between 4 and 10 percent of consumers suffer from something called stereo blindness, a sometimes treatable condition that makes it impossible to experience 3D movies or television. This is hardly a deal-killer, but one wonders how the spread of stereo music technology would have been affected if 10% of listeners had not been able to appreciate the difference.

Honestly, how 3D will likely establish its foothold in the living room is not with sports or movies, but with video games. Video gamers are already accustomed to buying expensive high-tech peripherals. They are used to content designed for one person, one screen. And when designed properly, 3D does not just add visual excitement to a game, but actually affects and enhances the gameplay itself.

So will 3D television lure viewers away from legitimate free Internet video, and from illegally pirated video files? It is too soon to tell. But there is a key difference to this strategy, as compared to some of the previously unsuccessful responses to piracy and the Internet. As with Steve Jobs and

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the iPod, 3D TV producers are offering consumers something new and exciting that, once the issues are worked out, will enhance their news and entertainment experiences. Rather than treating customers like the enemy, they are approaching customers as customers. And iTunes proves that people are more than willing to pay for their media, as long as they can experience a clear benefit.

CHAPTER 5

Summary

5. 0 Summary & Conclusion

It will be interesting to see if this technology really captures the imagination of the consumer, because if it doesn't, then the availability and sale of 3D-enabled hardware will be pretty slow. People are going to need some convincing if they are going to replace most of their home cinema equipment just to get the added benefit of 3D.

Having said that, if the response to 3D images is good (and this will be driven initially through 3D movies at the cinema), then it may be that 3D technology is finally here to stay.

The ideal technology for the home is autostereoscopic 3D, which doesn't require the wearing of glasses. However, this isn't going to happen any time soon and so at the moment we're going to have to get used to putting on our glasses if we are to enjoy the 3D experience.

Action

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6. 0 References

* Article Source: http://EzineArticles.com/?expert=Jayzn_Johns

* <http://ezinearticles.com/?3D-TV:-The-Future-Of-Home-Entertainment&id=5279533>

* <http://good3dtv.com/3d-tv/asian-technology-firms-believe-the-future-is-3d/>