3D TV Analysis

3D technology provides a compelling visual experience for users. Increased depth perception elevates the sense of immersion in the movie, making us feel like we’re experiencing everything the actors are. The popularity of 3D movies has led to the adoption of 3D-TVs in homes as well. This paper discusses the features, challenges, and my prediction of the future of 3D TVs.

Features

The main feature of 3D-TV viewing that improves user experience is the 3D glasses. They give that movie-theater feel of being close to the action. Images seem to come out of the screen, and action scenes are even more exciting.

Another feature that can improve user experience is focused attention. This can be especially helpful for gamers who want to avoid distractions. The glasses themselves create a barrier between the viewer and outside interruptions.

Movies, games, and even TV shows are being produced specifically for 3D-TV viewing, which creates a sense of exclusivity around the product. Those who want to be on the cutting edge of technology are likely to invest in 3D-TVs because it’s the coolest new gadget, if nothing else.

Unfortunately, the technology is a little too new. The pros are currently outweighed by the cons, and most users are waiting for upgrades before investing.
Challenges

One of the key challenges of 3D-TVs is the double image that occurs when users aren’t wearing 3D glasses. The output seems fuzzy and confusing unless you have the special glasses. Scher et al (2013) provided a solution to the problem by adding a third image which is cancels the second. They call this a 3D+2DTV. They found that viewers without glasses found the 3D+2DTV much more pleasing to the eye, and viewers with glasses still experienced a strong 3D perception.

Price is another challenge preventing 3D-TVs from becoming widely implemented. In addition to paying for the television, which can be around $400 more than normal TVs, glasses are another expense. Depending on the brand, they can run from $40-$170 per pair. That’s quite an investment (especially if there are young children involved).

Finally, the production of 3D content is a lot more complex than 2D. Even movie content created specifically for 3D viewing at a theater has to be modified for 3D-TV. The creation and delivery require lots of resources and data-intensive effort. Industry experts predict that 3D hardware development will continue to progress faster than content production (Ortiz, 2011).

Final Thoughts

The movie-going experience is heightened by in-your-face 3D effects, but I don’t think they will saturate our homes without a few important updates. Firstly, I would never buy a TV that necessitates the use of glasses. If my dog tears them up, I will have to go buy a new pair. If I’m having several people over for a party, I would feel like I needed to get glasses for everyone,
and then we would all have to walk around wearing the silly-looking things. I think the glasses requirement deters a lot of would-be customers, which is why Scher et al (2013) sought to resolve the problem. If we were able to implement this technology and provide 3D-TVs that require no glasses, I think they may eventually be as universal as HDTV is now.
References

http://libproxy.library.unt.edu:2247/stamp/stamp.jsp?tp=&arnumber=5752215

http://libproxy.library.unt.edu:2247/stamp/stamp.jsp?tp=&arnumber=6036086

http://libproxy.library.unt.edu:2235/citation.cfm?id=2487229