

A brief history of 3D TV

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Thursday, 09 December 2010 14:52



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3D television is all the rage, but a recent presentation at iVEC revealed that this technology is steeped in more than 100 years of history, and there are limitations and dangers the public need to know.

iVEC@University of Western Australia (UWA) associate director Professor Paul Bourke presented the talk last month entitled “Stereoscopic 3D technology: history, principles, and limitations”.

“The principles of stereopsis were well understood even before photography,” Prof Bourke says.

“People would draw two images with the knowledge of what they needed to present to each eye, then by looking at the two images, the 3D image would occur.”

Then in the early days of photography when black and white film was first developed, people were experimenting with this idea.

By 1851 commercial stereoscopes were available, becoming so popular nearly every second home in England had one.

“During this time, travel was very difficult for people, so most of these images were photographic material from adventurers who went to exotic places so the general public could get a sense of these far-off locations,” he said.

Prof Bourke said this was the first mass commoditisation of 3D technology.

While 3D anaglyph films emerged in 1922, the real boom in 3D movies exploded in the early 50s with the method of polarised projection systems.

Today, we are witnessing the advent of 3D televisions in our homes.

Prof Bourke said in light of this, much more research needs to be undertaken as there may be dangers of which we are not yet aware.

“Even though we look at the world through 3D all the time with our own eyes, 3D TV is still not as natural,” he said.

“There are muscles in your eye that bend your lens to focus what you are looking at.

“But with a 3D TV, it doesn’t matter where something is, whether it is on the screen or floating somewhere around it, your eyes are always only focusing on the screen – not at the real depth of the object.

“We do know its not guaranteed to damage your eyes because people have been watching 3D for years, the question is; if it is in the home, are people going to be watching this much more and for longer periods of time?

“Also, for young people who’s visual systems are still developing, if they are constantly doing this, will they then have later problems at focusing on other depths?”

Prof Bourke said these possibilities became an issue this year when Samsung released some startling warnings along with their 3D TVs, including warnings for pregnant women, the alcohol affected, the sleep deprived, and the elderly.

The warnings also recommend staying away from stairs and balconies after watching 3D.



3D TV may seem like a new and exciting invention, but the technology actually predates photography.

Image: Istockphoto