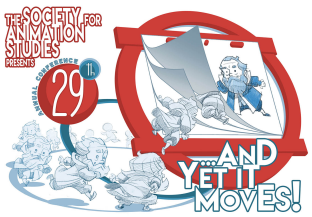
Panel B3

Sala delle Colonne 2

Animation and the 3D Digital World



Chris Carter, Sorin Oancea

What is Holography and How Will it Change Everything?

One of the strategies that consistently translated into box office success for the Walt Disney animation productions, was the employment of technical innovation to create not only visual spectacle, but an enhanced sense of realism and realistic experience. The studio was the first to bring sound in animation with the release of 'Steamboat Willie' (1928), advanced technicolour process in 'Flowers and Trees' (1932) and developed a multiplane camera to create a more realistic sense of depth in the 'The Old Mill' (1937). 'Phenomenal' box office success followed with each one of these productions a testimony of their visual appeal and storytelling. In the past two decades, the cutting edge techniques in CG animation allowed the addition of whole new level of detail and realism to their films, which amounted to a definitive qualitative leap over the traditional 2D animation.

That being said, while 3D CG animation is more solid, increasingly detailed and realistic, the screen itself remains stubbornly 2D and limited in terms of depth. Stereoscopy did not provide the promised sense of realism hoped for, and with that, the quest for creating a seamless, immersive visual world has moved from the cinema theatre into the amusement parks. The quest for the real 3D immersive cinema was on hold until now. A new technology is promising to revolutionise visual storytelling through the emergence of one of the most highly anticipated mediums: holography. Through its true 3D nature, holography presents us with the potential of a paradigmatic shift in screen space and motion while bringing back the mass shared experience by doing away with the VR headset.

Analysing the history and nature of holographic medium, this paper explores the potential implications of the real 3D holographic projections for storytelling, within the traditional perspectives and practices of animated and live action cinema.

I propose that gradual integration of holography in cinema that has already stated, will result into a new medium and theatrical experience, largely represented by three models:

1. *Holographic Augmented Cinema* (HAC) based on a mix between the traditional 2D screen and real 3D holographic projections;
2. *Holographic Virtual Reality* (HVR) defined by an entirely holographic projection that replaces the screen and the real world;
3. *Holographic Augmented Reality* (HAR) defined as a hybrid stage that includes real and holographic elements.

Biography

Chris Carter
chris.carter@qut.edu.au

Chris Carter is the Head of Film, Screen and Animation and a Chief Investigator of Disruptive Technologies in the Creative Lab at Queensland University of Technology in

Brisbane Australia. Chris has been teaching and publishing the field of animation, games and visual effects for over 15 years. He currently supervises postgraduate research students working on a diverse range of projects and topics including virtual production, stylized motion capture, 3D visualization, 3D photogrammetry and animated virtual reality filmmaking.

Sorin Oancea
s.oancea@qut.edu.au

Sorin is a PHD candidate and Associate Lecturer at the Film, Screen and Animation School of Queensland University of Technology where he teaches, researches and supervises postgraduate students while working on a range of projects investigating the transition from traditional cinematic storytelling, to virtual and hybrid reality using holography. Prior to this role, Sorin worked in the animation industry for over 16 years in various roles from Animator and Modeler to Writer and Series Director.