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The new costume designer:

An exploration of digital and physical technologies for costume development in the film industry.
Three-dimensional (3D) simulation software is utilised for digital visualization of garment design, pattern development, drape, and fit on virtual models and avatars within the costume and fashion industries. This practice-led project explores the use of digital design technologies for costumes created in a digital space and asks “How do current digital and physical technologies work as integrated practice within the industry of costume design for film?” From a fashion perspective, many researchers have looked into how historical costumes can be reproduced as accurate 3D models or how 3D modelling software can be used for prototyping and fit for production efficiency. However, there is little published academic research discussing the use of digital technologies by costume designers for physical costume design and development in the film industry. Initial research for this project included interviews with experts from physical costume design departments in the film industry to gain insight as to the extent and relevance of collaborative work experiences using both physical and digital processes, systems and technologies within their practice.

Through an original creative project using an iterative design process, this research project focuses on the generation of physical costume concepts for a fantasy creature. These costumes are designed to tailor to the exaggerated humanoid body of the “koloss” character from Brandon Sanderson’s Mistborn Era 1 series as he morphs from a child to an adult. This project explores how patternmaking and 3D cloth simulation software can be applied to costume generation that navigates the physical and virtual world. Digital and physical visual, patternmaking, and sampling tools are utilised with tacit knowledge of an experienced technical fashion designer to explore how physical costume designers can feel empowered in the creative process when working between physical and digital departments.

Keywords: digital technologies, costume design, fantasy, patternmaking, 3D simulation, Computer Aided Design (CAD), digital workspace, computer-generated imagery (CGI).
Acknowledgements

I would like to thank many people who have supported me throughout this project and for whom I will be forever grateful for:

The School of Design at Massey University, Wellington for the generous funding that gave me the opportunity to undertake this Masters project. My supervisors Deb Cumming and Tanya Marriott for always challenging me, giving me new perspectives on design and making, and always being generous in our meetings with both time and knowledge.

The film industry experts for their enthusiasm to share with me their experiences in the industry and giving feedback on my project. Cameron Doidge for his work on the avatars, Cameron Holder for his work on the mannequins, and Uli Thie for kindly making the mannequin stands.

The School of Design staff, especially the fashion and technical staff, for always being an ear to listen, offering help and feedback, and encouraging me throughout this journey. Carol Stevenson and Brent Davenport for the extra support when I needed a work/study balance.

Finally, thank you to my friends and Masters crew for chatting and keeping me sane. My family Shane, Sonya, Louis, Rachel and Nathaniel for always encouraging me to follow my passions and being proud of what I achieve, and Mark for always keeping me laughing and supporting me through the ups and downs of this project over the last two years.

Thank you.