XR Stories Case Study

Turning the real world into video games and playable spaces

R&D funded by XR Stories through an Arts and Humanities Research Council grant has developed new techniques and skills for a media art studio based in Hull to create digitally projected games in real places and spaces. Increasing the techniques at their disposal has opened up a new world of interactive experiences for **Studio Maguire**, who, supported by Hull-based arts-development organisation **Back to Ours**, are transforming how they produce digital art and developing new digital products for new audiences.

Studio Maguire are successful artists and creators who use projection mapping as a tool for telling stories. They have brought pop-up books, marble statues, dinner plates, theatre sets and paper dioramas to life, but the narratives they created were pre-set, and experienced 'passively', as with a film or a book.

Working with **University of Hull** researchers, Dr Darren Mundy and Dr Jason Hayhurst, and students from the Digital and Game Design department of its School of Arts, Studio Maguire used the R&D project to develop new skills in 3D game engines and developed new workflows for their creative practice. These new practices have enabled the studio to create interactive games projection-mapped onto walls, and paper sculptures. The implications for this are vast, given that the team could now potentially projection-map anywhere, from miniature scale environments to the sides of city landmarks.

Studio Maguire created **three new prototypes/products** testing these newly developed capabilities:

1. **Lucy** is a paper diorama which can be played as a video game. An exquisitely detailed cut paper sculpture is combined with projection-mapped features and lighting, on and inside, and experienced as a platformer-style video game. https://www.studiomcguire.com/lucy

2. **Shelf Life** is a game projected onto a wall, making use of physical shelves and picture frames. The player's character interacts with the physical features, solving puzzles and overcoming obstacles to win the game. https://www.studiomcguire.com/shelflife

3. **Pinball-Wall** is a product which enables a user to create a playable pinball table using physical features on a surface: any wall, any size. https://vimeo.com/413635266

As a direct impact of the XR Stories R&D funding, Studio Maguire has accessed new commissions, won a Digital Catapult Creative XR project grant to develop augmented reality pop-up book products, and projects increased turnover and profit and new staff to be employed in 2023.

Further information:

Studio Maguire: https://www.studiomcguire.com

University of Hull: https://www.hull.ac.uk/faculties/face/more/research