Venice, Island of San Giorgio Maggiore

Longhena Library

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*The Birth of Chameleon* ***|***by Matt Pyke\*

***Chameleon* aims to capture the uniqueness of the Fondazione Giorgio Cini** and, in particular, to illuminate some of the lesser-seen areas of this place. Therefore, we filmed the cloisters, the Longhena Library, the Manica Lunga, the woods, the Vatican Chapels, and more. This is digital art, but in this case designed with a particular purpose: to invite the public to immerse themselves in the environment and discover some of the unique aspects and details of such a special place.

**One of our long-standing areas of exploration is figurative art and the creation of new forms of moving images.** We were naturally inspired by the scanning and archiving work done by the Fondazione Giorgio Cini. We liked the idea of combining the two around a walking figure, which explores the environment, but also scans and absorbs the materials, textures, and surfaces of the surrounding environment.

The classical architecture, combined with the cloisters, internal corridors, tapestries, and the woods provided us with many interesting textures to work with. As starting material, it was structurally different from what we usually use, and therefore very stimulating and ideal for creation with new technologies.

**Our starting point was to investigate how it was possible to map a visual, photographic, or filmic environment onto the surface of a human body**. Secondly, we needed to understand how that surface could be sculpturally modeled so that it would not just be an image on a body, but a texture with reliefs and contours.

**We developed this technique of extruding the environment to create a three-dimensional figure in continuous metamorphosis based on the places it crosses**. Initially, it was developed in real-time, so that we could place the figure in these environments and see how the context influenced the body's textures. Finally, we used visual effects software to track the scene and get the correct perspective, light, and shadows before adding the figure to those scenes.

**From a technological standpoint, to create Chameleon, we first utilized a highly intriguing new AI software** that tracks the movement of the walking actor in space, extracts the data, removes it from the environment, and replaces it with a CGI (Computer Generated Imagery) figure. The result is a realistic human movement traversing through space. Subsequently, we focused on real-time texture mapping, capabilities that were not possible until recently. **The outcome appears truly distinctive to us.**

**With our devised technique, we discovered that the moving figure works best in environments with high contrast**, such as transitioning from a corridor to an outdoor space. These contrasts allow us to produce transformative effects on *Chameleon*.Therefore, we experimented with introducing numerous and diverse transformative instances. We observed similar effects with human performances: the more dynamic the real-life movement, the more captivating the effects become. Hence, even as *Chameleon* simply walks, we integrated changes in rhythm and direction to enhance its impact.

A significant portion of our figurative work is CGI, resulting in creating a **realism that is impossible** in some respects within a fairly neutral environment. However, the challenge here was different: *Chameleon* draws inspiration from advancements in digital scanning, augmented and virtual reality developments, and the nature of the Foundation itself.

Our goal has been very precise from the outset because - and it has been exciting for us - we had to consider how this figure would respond to the environment of the real world in which it lives and exists. Here on the island.

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**Matt Pyke** is the founder and creative director of Universal Everything.With a keen interest in cognitive perception and the human ability to find meaning in the abstract, Matt oversees Universal Everything's pioneering research and development into new forms of natural representation. He collaborates with artists, cultural institutions, and brands such as Apple, Nike, Hyundai, Chanel, Radiohead, Barbican, MOMA, and the Sydney Opera House.

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