

Dr.SNS RAJALAKSHMI COLLEGE OF ARTS AND SCIENCE (Autonomous)

**Accredited by NAAC - UGC with 'A+ Grade (Cycle IV)
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Coimbatore- 49**



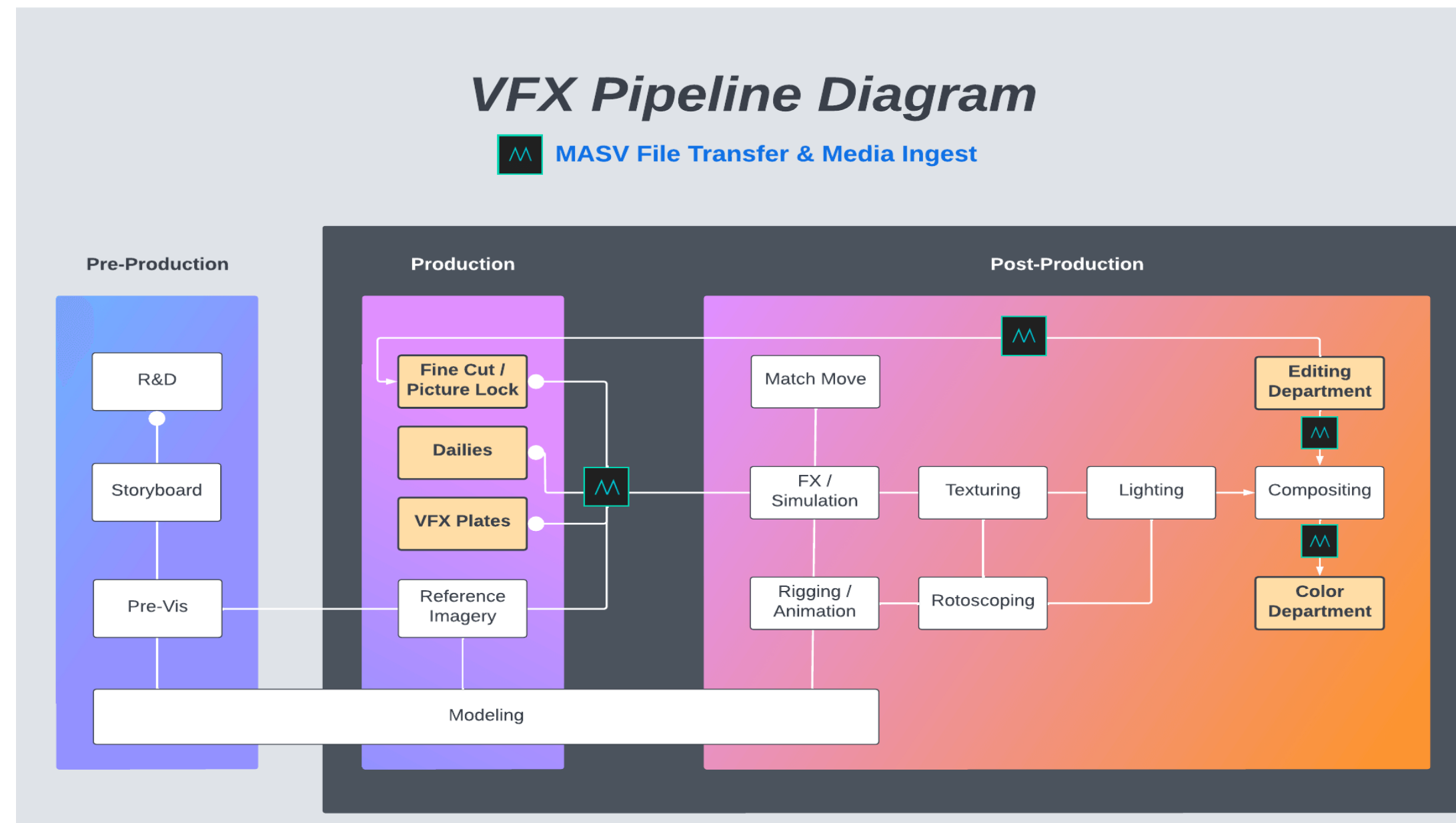
DEPARTMENT OF COMPUTER SCIENCE (GRAPHICS & CREATIVE DESIGN)

VISUAL EFFECTS PIPELINE VISUAL EFFECTS UNIT-1

**Ms.S.Saranya MSc(IT)
Assistant Professor,
Department of Computer Science (GCD)**

Introduction to the Motion Picture

The Motion Picture/VFX Pipeline is a structured workflow that takes a film or a visual effects project from its conceptual stage to the final product on the screen. It involves a series of interconnected stages and processes

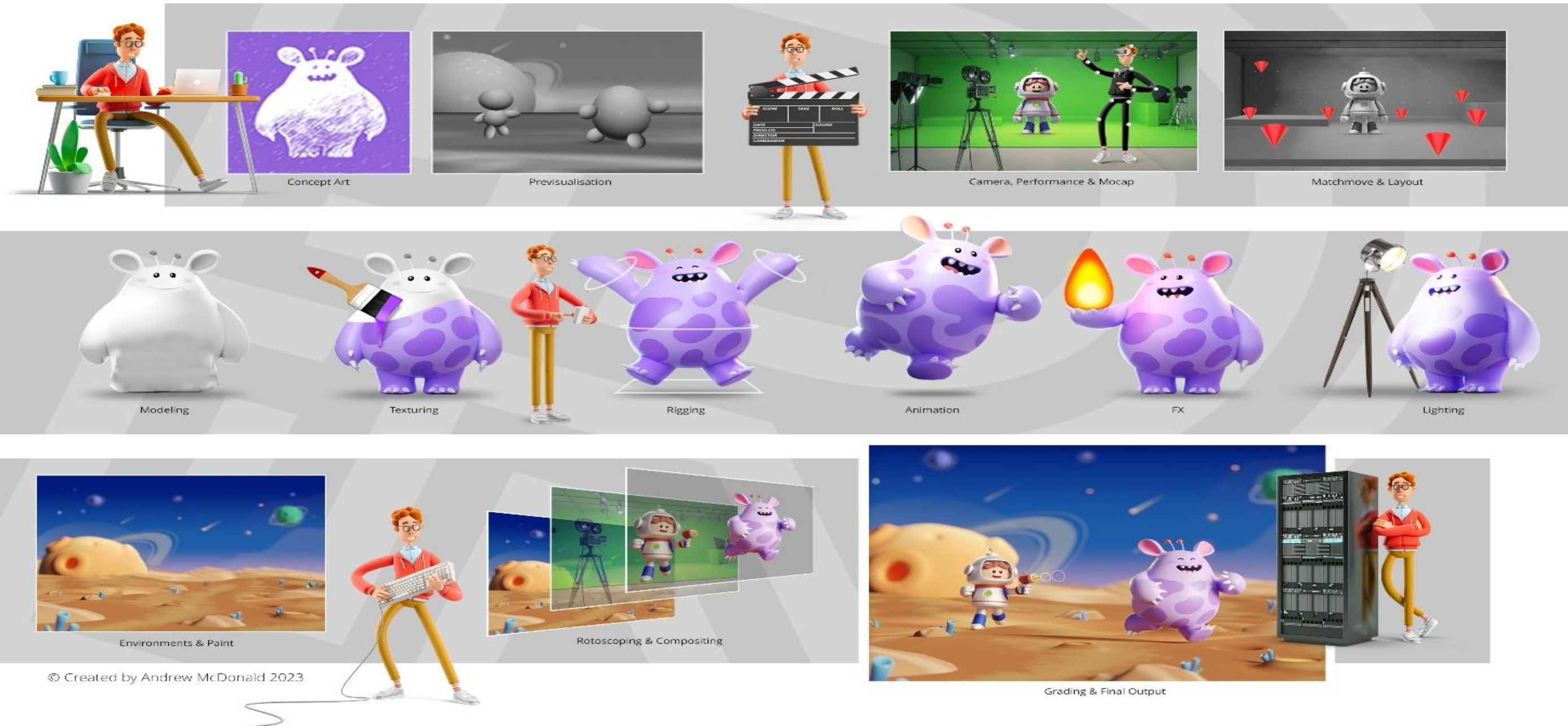


VFX Pipeline

VISUAL EFFECTS PIPELINE

The main steps required to create Visual Effects for feature films.

The first step to your future creative career
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Conceptualization: This phase involves brainstorming, script development, storyboarding, and initial planning. Ideas are translated into visual representations, often through concept art and storyboards.

Pre-visualization (Previs): Before filming begins, Previs helps in visualizing complex scenes, camera movements, and overall sequences. It assists in planning shots, action, and effects, providing a blueprint for the production team.

Production: Actual filming takes place during this stage. Live-action footage, green screen shots, and other necessary elements are captured on set or location.

Editing: Footage captured during the production phase is assembled and edited to create the base for the VFX work. Editors compile the scenes according to the script and director's vision.

VFX Planning: This involves detailed planning for the integration of visual effects. It includes decisions on which scenes need effects, the level of complexity, and coordination with the live-action footage.

Asset Creation: Artists start creating digital assets required for the VFX shots. This includes 3D models, textures, characters, environments, props, etc.

Animation: Once assets are ready, animators bring them to life. This stage involves movement, actions, and interactions within the digital environment.

Simulation: Certain effects such as water, fire, smoke, cloth dynamics, and physics simulations are created to enhance realism in the scenes.

Compositing: Different elements such as live-action footage, CGI (Computer Generated Imagery), VFX, and other assets are combined in this phase to create the final image. Color grading, matte painting, and integration of various layers take place here.

Rendering: The composited scenes are rendered, which means generating the final images or frames. This is a computationally intensive process that generates the high-quality images required for the final output.

Quality Control and Review: Teams review the rendered shots for quality, consistency, and adherence to the director's vision. Adjustments and revisions are made as needed.

Final Output: The approved shots are compiled together to create the final film or VFX sequences. Sound effects, music, and other post-production elements are added for the complete cinematic experience.

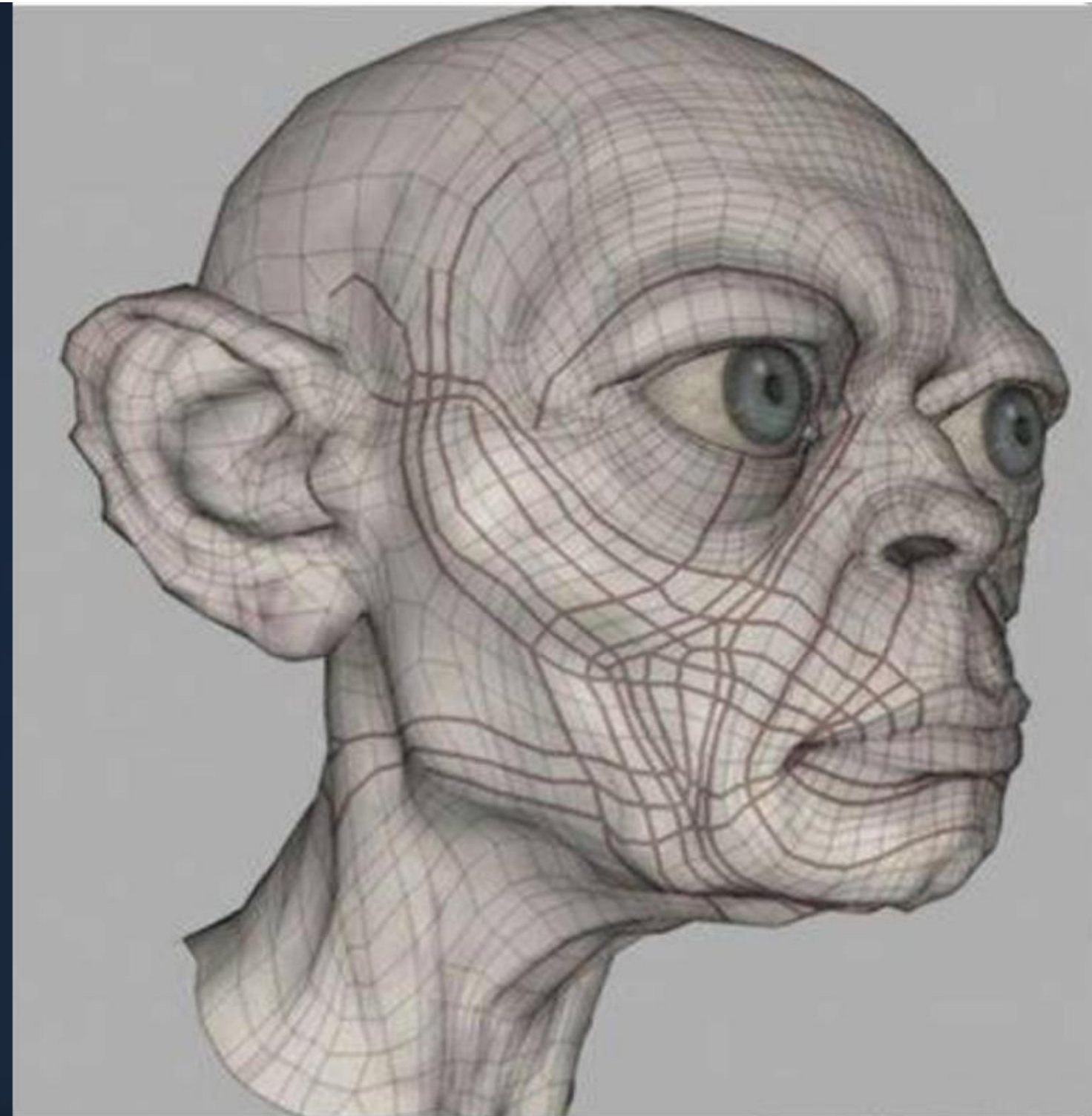
ASSET CREATION

BUILDING THE DIGITAL WORLD

Everything that doesn't exist in the real world must be built by artists.

Modeling: Creating the 3D geometry and topology of characters, props, and environments.

Texturing: Painting surface details like skin pores, rust, or dirt to give the model material properties.

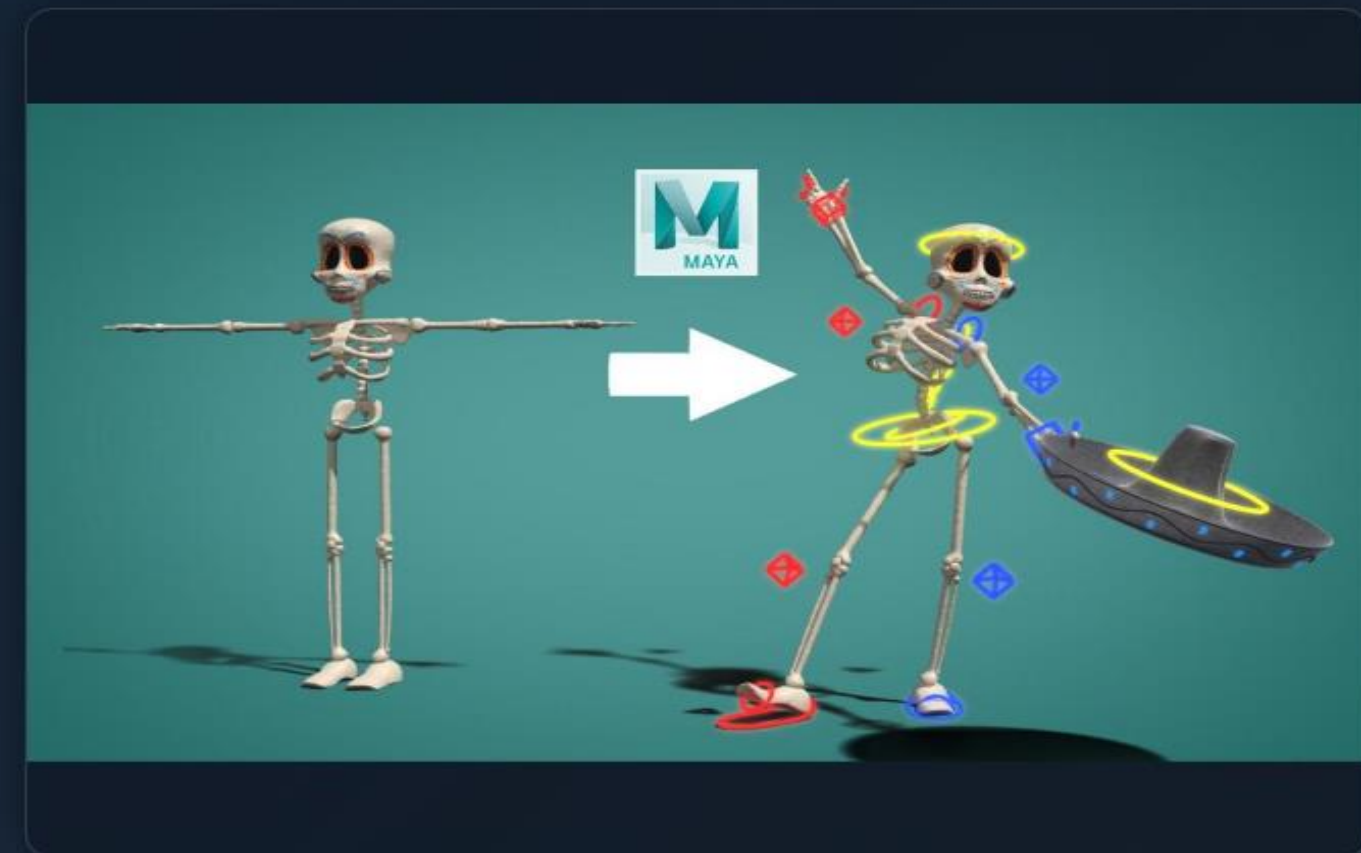


RIGGING & ANIMATION

DIGITAL PUPPETRY

Before a model can move, it needs a skeleton and a control system.

- > **Rigging:** Inserting virtual bones and defining how the "skin" deforms when those bones move. Complex rigs include facial muscles and cloth controls.
- > **Animation:** The art of bringing the character to life, frame by frame, creating the illusion of weight, emotion, and performance.



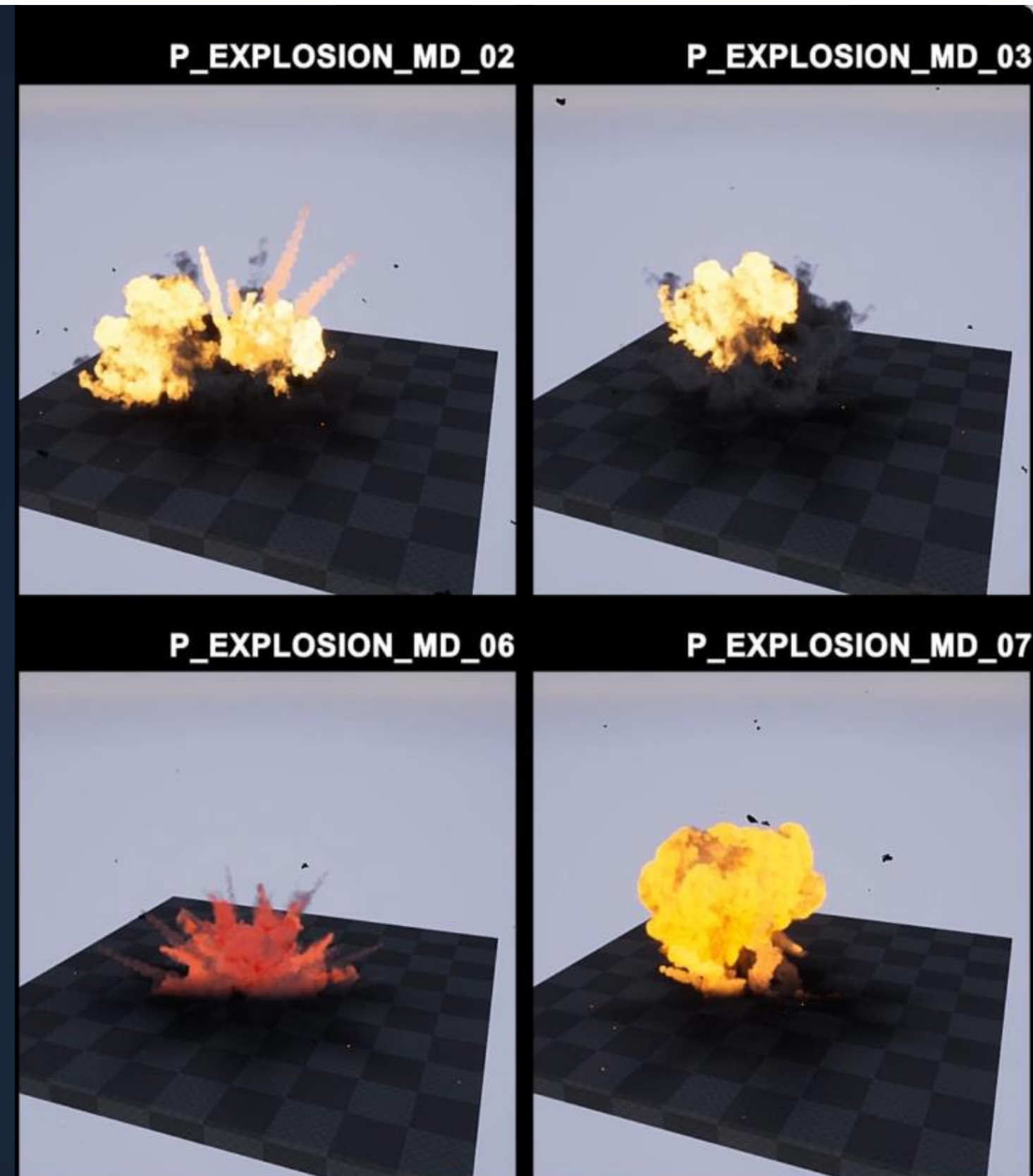
FX & SIMULATION

CONTROLLING THE ELEMENTS

Some things are too complex to animate by hand. FX artists use physics-based algorithms to simulate natural phenomena.

Simulations: Fire, smoke, water, explosions, and magical particles.

Dynamics: Destruction effects, cloth tearing, and hair movement.



THANK YOU