Girish Balakrishnan
Visual Effects | Simulation

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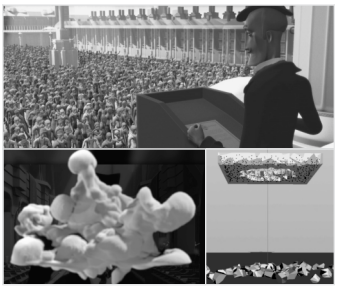
Demo Reel Breakdown

1 | Pound for Pound



Responsibilities:
Tasked with previs camera layout of all shots. Cleaned HumanIK-retargeted motion capture and virtual camera system animation using animation layers and hand-keyed modifications. Managed all shots within Shotgun Studio project management software.
Explosion: Simulated 8 unique systems in Houdini that was cached and upres'd for final Mantra render. Each system was timed and tracked to a camera move & relit in Nuke using point-normals and point-temperature values read from the rendered point cloud.
Debris: Simulated 2 debris systems in Houdini to add to the explosions including a magnet force RBD fracture system and a procedural debris system that would fracture any part of an object over time based on its overlap with a primitive solid.

Software:
Maya, Houdini, Massive, Nuke, Renderman

Awards:
Digital Media Annual Review 2013

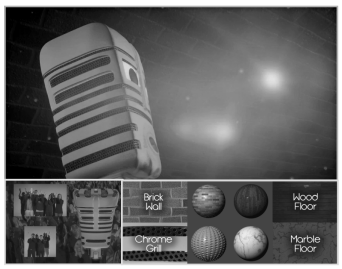
2 | Spirit of the Virginia: Prologue (Retina iPad App Cinematic)

Responsibilities:
The final visual effects sequence, involving reveal of the flying train over a mystical nighttime vista,
Cloud System: Shaped the cloud base using Nurbs spheres and then instantiated n-Particle emitters within each sphere to procedurally build each of the cloud systems.
Engine Flame: Utilized a solid cone-shaped object as a base and ran a fluid simulation to roll off the surface combined with 2D sprites. This effect was then rendered out and parented to a 3D-tracked null object located at the base of each train engine.
The entire shot, including the multi-pass 3D models, simulations, and matte paintings, were then composited and rendered at 2K resolution for the iPad Retina display.

Software:
Maya, After Effects, Nuke, V-Ray

Awards:
Adobe Design Awards 2012 - Semi Finalist
Research Day 2012 - Dean's Merit Award

3 | Feeling Good



Responsibilities:
All Elements. Custom Renderman shaders were written & compiled for environment objects and optimized for animation of the main character. Audience footage was captured in front of a green screen, keyed, rotoscoped, composited, and graded in Nuke to achieve the multiple crowd shots.

Software:
Maya, Modo, After Effects, Nuke, Renderman

Awards:
Digital Media Annual Review 2012

4 | Vigilante

Software:
Maya, Houdini, SynthEyes, Nuke

Responsibilities:
All Elements. Main actor was captured in front of a green screen, keyed, rotoscoped, composited, and graded. Actor Markers were tracked in SynthEyes and retargeted to a upres'd cape model. nCloth cape was simulated in Maya and shading was matched with the moving actor. City was modeled off of reference and textures were projection mapped based on the source camera. Rain was simulated in Houdini with wet-map glass streaks generated procedurally as the particles interacted with the glass object. All elements were layered in 3D and composited within Nuke.

5 | Starflies

Responsibilities:
Team Leader. Responsible for all the particle dynamics and fluid simulations as well as scene assembly and multi-pass rendering & compositing for this piece.

Software:
Maya, ZBrush, After Effects, Nuke