

Jason Rickwald

Demo Reel 2015

Breakdown



0:12 - 0:17

Madagascar: Escape 2 Africa

Muscle Bulges

Character geometry deformation for muscles popping into place.



0:17 - 0:21

Rise of the Guardians

Dream Sand

Sand streams and falling sand. Particle simulation, rendering, and compositing.



0:21 - 0:23

Home

Popcorn Cannon

A popcorn machine pops up and sprays a character with popcorn, which piles around him and fills his mouth. An in-house Bullet solver was used for the popcorn in the machine. The popcorn pile was a separate Houdini DOPs simulation, and the spray and some other popcorn was particle simulations. All with heavy post-processing.



0:24 - 0:25

Rise of the Guardians

Paint River

Paint river development for all paint river shots. Liquid simulation was done in Naiad. Also created the render passes and an initial pass of the compositing for handoff to Lighting/Compositing department.

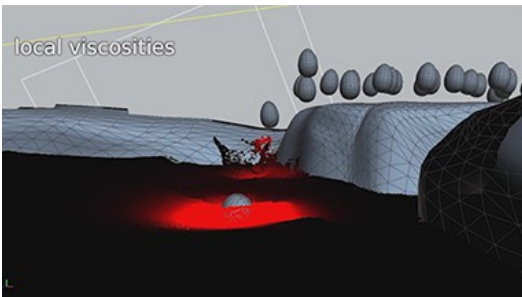


0:25 - 0:29

Rise of the Guardians

Paint River

A close-up final lit render of the paint river.

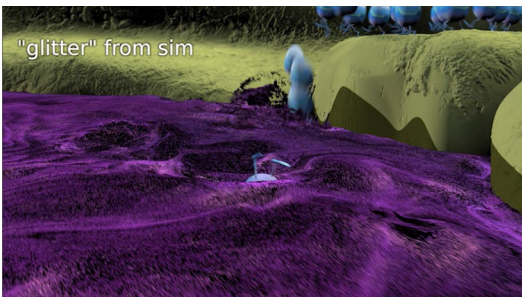


0:29 - 0:32

Rise of the Guardians

Paint River

The liquid simulation in Naiad, using a visualization of variable viscosities used to change the look of the fluid locally around objects.



0:32 - 0:37

Rise of the Guardians

Paint River

Various render passes used in the final render.



0:39 - 0:46

Home

Drone Swarms and Attack Energy

Swarms of “Gorg drones” were achieved using custom system that I wrote which combined a flocking simulation with some procedural elements to maintain a certain “twitchy” look dictated by the art direction and animation of the Gorg. Far swarms were rendered as particles, while closer swarms were given to the Lighting department with LOD taken into account.

The green “attack energy” effect was a simple particle effect, driven by noise in some shots and actual drone impacts in others; rendered and composited by myself.

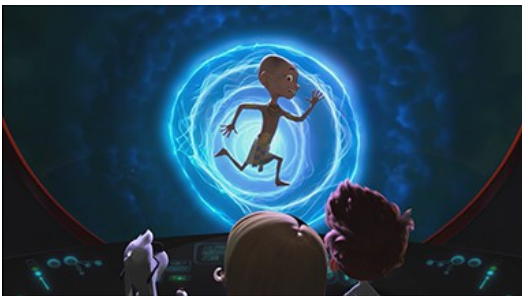


0:46 - 0:49

Madagascar 3: Europe's Most Wanted

Burnout Smoke

Billowing “burnout” smoke. Gas simulation, rendering, and compositing. Also developed a render treatment to achieve a “cartoony” look for gaseous elements that was used throughout the film. These shots were removed from the final film and never completed.



0:49 - 0:51

Mr. Peabody & Sherman

Time Vortex

A time vortex tunnel thing surrounded by clouds, loosely based on the time travel tunnels elsewhere in the film. Development on the effect was started by another artist, but I did a considerable amount of work to make it hold up at closer distances and to give it some movement. Clouds were procedurally built volumes. Rings were partially procedural and partially particle simulations. Many render passes were made and composited together by myself.



0:51 - 0:56

Home

Gorg Superchip Overdrive

An ill-defined effect where a “Gorg” device somehow interfaces with a “Boov” computer. I did a great deal of the look dev for this effect and also installed it sequence-wide. It was mostly procedurally generated poly curves, with a gas simulation in a spherical coordinate system for the bubble surface interaction. Most of the look was achieved in compisiting.



0:56 - 0:58

Madagascar 3: Europe's Most Wanted

Rocket Dog Spark Trail

Spark trail emitted from the "rocket dog jetpack".
Simulation, rendering, and compositing.



0:58 - 1:00

Madagascar 3: Europe's Most Wanted

Scent Trail

A wispy "scent trail" which is inhaled by the villain. Gas simulation, rendering, and compositing.



1:00 - 1:03

Madagascar 3: Europe's Most Wanted

Smell-o-Vision

A stylistic view of a "scent memory" that the villain sees after catching the scent of the main character. Developed and refined the complete look of this effect. Gas simulations, rendering, custom shading, and compositing.

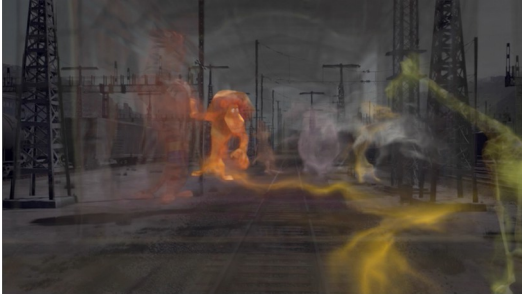


1:03 - 1:06

Madagascar 3: Europe's Most Wanted

Scent Trail

A wispy "scent trail" which is inhaled by the villain. Gas simulation, rendering, and compositing.

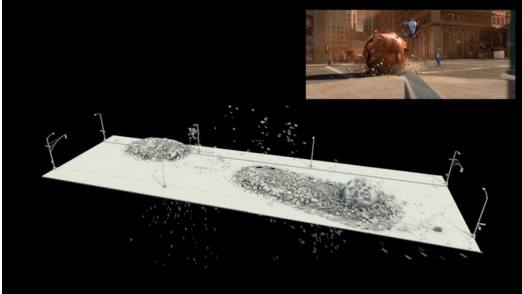


1:06 - 1:11

Madagascar 3: Europe's Most Wanted

Smell-o-Vision

A stylistic view of a “scent memory” that the villain sees after catching the scent of the main character. Developed and refined the complete look of this effect. Gas simulations, rendering, custom shading, and compositing.



1:11 - 1:19

Megamind

Automated Road Demolition

A system for automating the demolition of roads from the procedurally generated city. A custom deformer was used to create the trench and bulge under collider objects. Road surfaces were extruded, fractured, and ejected using a third party tool called BlastCode (which was used for the majority of demolition shots on this production). Rigid body simulation was done with a Bullet solver. Extra debris was added as a particle simulation. Shots shown in the corner demonstrate how this tool was used by other artists.



1:19 - 1:22

Home

All Effects

Bubbles were advected through a gas simulation and then processed to add wobble and merging. Bubble geometry, an “aeration” volume, and an ocean surface with waves and splash ripples were all handed off to Lighting. When the VFX Sup was looking for a way to make this feel more under water, I generated a “light shaft” volume pass which I composited into the main comp.



1:22 - 1:25

Mr. Peabody & Sherman

Anubis Fireball

A stylized and graphic fireball shot from the mouth of Anubis. Many iterations on simulation settings, post-processing of the volume, shader tweaking, and compositing techniques were required to achieve this particular look defined by the VFX Supervisor. Gas simulation, rendering, and compositing.



1:25 - 1:28

Madagascar 3: Europe's Most Wanted

Ferrari Destruction

The weight of the van and the spinning wheel tear a Ferrari apart and light it on fire. A variety of elements and techniques were used including keyframed animation of rigid transforms and deformations, sparks, rigid bodies for debris and glass, and gas simulation for smoke and fire. Also did rendering and compositing of smoke and fire.



1:28 - 1:36

Madagascar 3: Europe's Most Wanted

Building Modeling Tools

Wrote tools for the modeling department to facilitate faster creation of stylized buildings for city sets in the film. Buildings are created from libraries of doors, windows, etc. Initially, texture maps are used to represent the pieces of the building, but real geometry is easily swapped in at the end of the process. Shots shown in the corner show some resulting buildings in the final movie.



1:36 - 1:38

Madagascar 3: Europe's Most Wanted

Rocket Dog Spark Trails

Spark trail emitted from the "rocket dogs". Simulation, rendering, and compositing.

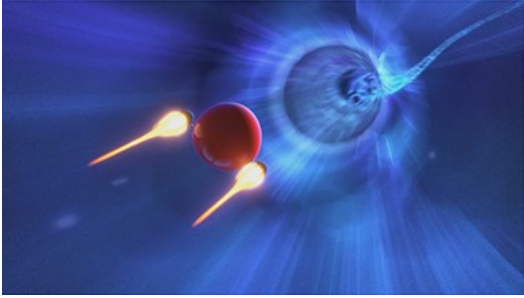


1:38 - 1:43

Mr. Peabody & Sherman

Time Travel Tunnel

A tunnel made of evolving rings. Distant rings were instanced from a library, but most rings were built from a complex combination of procedural and simulation techniques. Ultimately, the end result was a very large particle set which was rendered in Krakatoa. Many interesting render passes were then composited to form the final image.

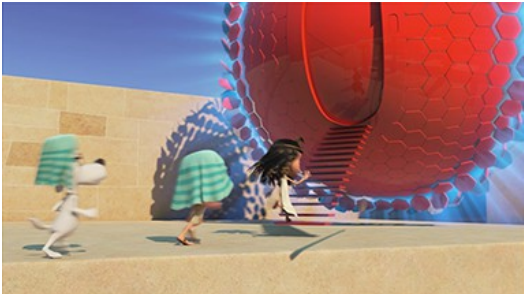


1:43 - 1:45

Mr. Peabody & Sherman

Time Travel Tunnel Reentry

The Wabac Machine reenters a time travel tunnel. Many of the techniques are the same as for the previous shot, but extra elements were needed for the disintegrating rings at the head of the shot and for the ring dust that trails off of the Wabac as it reenters.



1:45 - 1:48

Mr. Peabody & Sherman

Wabac Reveal

The Wabac Machine's cloaking device progressively turns off. Tile flips were procedurally animated. Various render passes and compositing techniques were used to generate the cloaking distortion and the god rays.

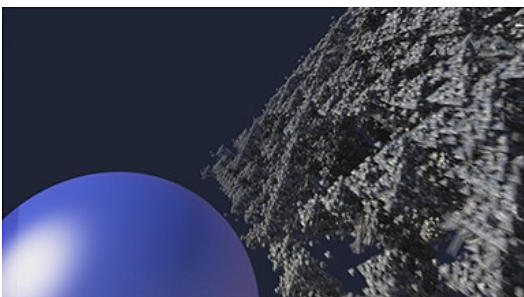


1:48 - 1:58

Home

Gorg Swarm Tests

Early test work on “Gorg drone” swarms that formed tetrahedral formations, with careful attention payed to how individual drones moved as well as the movement of the whole swarm, in order to match the look defined by the VFX Sup and Animation. This style of swarm was eventually scrapped when the “mega swarm” was removed from the film. It was replaced by a more organic flocking simulation that I also developed.

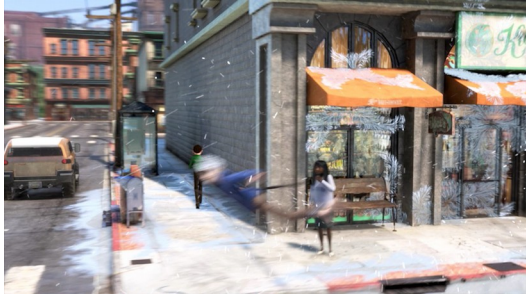


1:58 - 2:12

Home

Mega Swarm Dev and Tests

Early development work and testing on a “mega swarm” which was formed from the interlocking of many smaller swarms of “Gorg” drones. Its shape was inspired by Sierpinski triangles. This plot point was eventually cut from the movie. However, the green energy effect that I was developing did inspire a similar effect that was used on the Gorg mothership.



2:12 - 2:19

Rise of the Guardians

Frost

Painting and simulation of magical frost growth on the cars and buildings. Frost growth was achieved by painting out paths and growing frost from seed points using cellular automata.



2:19 - 2:24

Mr. Peabody & Sherman

Time Vortex

A time vortex tunnel thing surrounded by clouds, loosely based on the time travel tunnels elsewhere in the film. Development on the effect was started by another artist, but I did a considerable amount of work to make it hold up at closer distances and to give it some movement. Clouds were procedurally built volumes. Rings were partially procedural and partially particle simulations. Many render passes were made and composited together by myself.

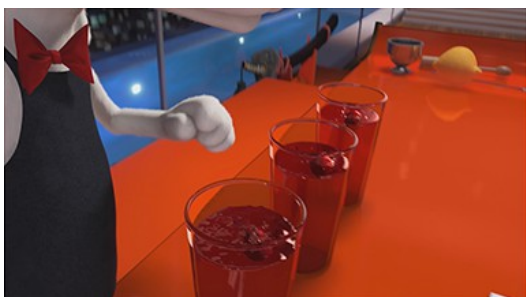


2:24 - 2:25

Monsters vs Aliens: Mutant Pumpkins from Outer Space

Pumpkin Explosions

Body pumpkins and pumpkin hand exploding. Pumpkins were fractured, and explosions were created from the fractured chunks and multiple particle simulations for the mist, "goo", and seeds. Also, hand animated some pieces and did the rendering and compositing of the particle effects.

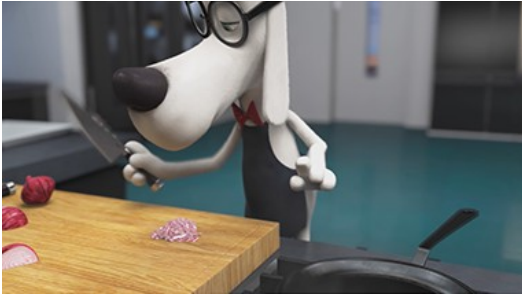


2:25 - 2:27

Mr. Peabody & Sherman

Cocktails

Cherries are dropped into three drinks. Houdini FLIP simulations for the splashes in each drink, with a great deal of post-processing to get the drinks to settle in time for the handout. I also worked closely with the Lighting artist to assist with the rendering of the liquid.



2:27 - 2:30

Mr. Peabody & Sherman

Onion Chop

An onion is chopped and dropped into a hot frying pan. A combination of rigid body simulation, hand animation, and procedural techniques were used. Also, a gas simulation was run, rendered, and composited in for the steam off the pan.



2:30 - 2:33

Mr. Peabody & Sherman

Onion Flip

The chopped onion is cooked with an alcohol and flipped, setting it aflame. The onion was a post-processed rigid body simulation. The liquid pour was almost entirely procedural, with a small particle simulation for splashing. The fire and smoke were a gas simulation that I also rendered and composited.



2:33 - 2:39

Madagascar 3: Europe's Most Wanted

Banana Squibs

Banana “squibs” (small explosions) from the impact of bananas with the ground. This effect had to transition smoothly from normal speed to slow motion. Particle and rigid body simulation.



2:39 - 2:40

Monsters vs Aliens: Mutant Pumpkins from Outer Space

Ground Fog

A “fog machine” type of particle effect. Also, created tools to simplify the lighting of the fog from the various colored point and spot lights in the scenes. Simulation, rendering, and compositing.



2:40 - 2:41

Bob's Big Break

Flaming Propeller

Fire and smoke off of the propeller. Gas simulation, rendering, and compositing.



2:41 - 2:49

Madagascar 3: Europe's Most Wanted

Cannon Confetti

Confetti as a particle effect advected through gas simulations. Simulation, rendering, and compositing.



3:05 - 3:10

Madagascar: Escape 2 Africa

"Nipple Twist" and Other Character Finalling

Character geometry deformations and hair cleanup.
