



### 0:05 - S.W.A.T. - Record Label

I replaced the label of this spinning record with text artwork provided by production. Planar tracks were combined with simple expressions to stabilize the working space. Unique composites were built for each light direction in the plate, and mixed between with expressions sampling shifts in luminance.



### 0:09 - The Tick - Pushing the SUV (3 cuts)

For these CG vehicle shots, I combined VRay AOVs, RGB-lit smoke and spark renders, a scuffed street surface painting, stock smoke elements, and outsourced actor roto to build the final sequence. Careful attention was given to the balance of practical and CG shadows, and re-texturing in comp to add irregularity to the SUV's surface.



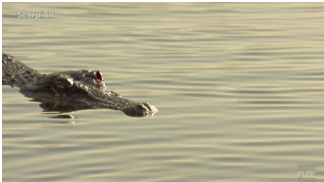
### 0:15 - Limitless - Head Replacement

Part of a "heightened-reality" montage, I isolated the lead actor's head from a green screen plate and swapped it with the body of a professional guitarist. Stabilization, spline warps, and reconstruction of the collar and hood helped blend the seams.



### 0:19 - Scorpion - Sinkhole Opens

With roto help from several artists, I projected a ground replacement matte painting over this plate, then integrated CG object renders from VRay, and Mantra renders of crumbling surface animation. Multiple layers of stock dust and mortar explosions helped add detail.



### 0:23 - Scorpion - Alligator Close-up

For this hero shot, our alligator was rendered full-body. In comp, I projected the empty plate onto a high-poly plane, displacing it with the actual waves from the footage. This generated Deep data to mask the creature below the waterline, as well as raytraced reflections of what remained visible above the surface.



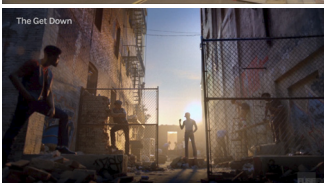
### 0:24 - Scorpion - Wide Alligator Shots (3 cuts)

To blend CG with the surrounding water, I combined Deep holdouts with projected gradients to extract the active portions of the simulated elements, and built replacement Diffuse lighting passes to more closely match the plate. The rope line connecting to the actor was drawn in 2d from reconciled points. Some paint and roto help came from fellow artists.



### 0:28 - Rosewood - Police Car Replacements

Every "Miami PD" police car in this comp was originally a Los Angeles black-and-white. I isolated the new body surfaces from the CG, then warped and/or reprojected each vehicle to more accurately line up to the plate. The lights, wheels, and reflections were preserved from the footage to retain realism.



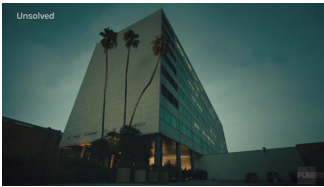
### 0:30 - The Get Down - Set Extension

CG walls and sky matte painting elements were provided to me for this green screen set extension, replacing the background, portions of the chain-link fence, and everything above the first floor.



### 0:37 - The Tick - Tick Escapes Across the Rooftop

After dialing in the AOV renders of this Tick digi-double, I generated accurate contact shadows for his body on the watertower in comp using imported geometry. A little jiggle added to the tower at impact helped match some of the cartoon physics of the shot.



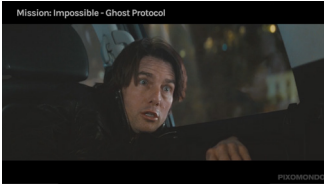
### 0:40 - Unsolved - Time Lapse

To convey that a single investigator is working late into the night, I built this time-lapse style transition with about a dozen clips from the production's B-roll shoot. Each clip was warped to align with the rest, with multiple relights and color treatments transitioning against a stock footage sky.



### 0:45 - True Detective - Driving Composite

Interactive light enhancements, anamorphic lens artifacts, depth blur, window texture, and layered reflections all helped blend this extended driving scene with the stylized color of the surrounding city footage.



### 0:49 - Mission: Impossible Ghost Protocol - Car Attack (9 cuts)

Practical smoke, sparks, and lens flares added complexity to the keying and integration of this blue screen sequence. Additional enhancements to the bullet hits and blood squib helped heighten the action. The final version of the ceiling blood spatter seen here was added by another studio after the shot was delivered.



### 0:57 - Unsolved - Petersen Museum Replacement

Shot on location where the real event took place, the Petersen was replaced here to match the time period before its exterior was redesigned. Comp duties included cleaning up the street and sky, integrating the CG building and tower elements, adding additional pedestrians, and layering in cards for the rooftop spotlight beams based on archival photo reference.



### 0:59 - Scorpion - Cabe Jumps from the Van

With outsourced roto isolating the stunt performer, I recomposed this shot using a painted background, plus CG van, firestream, and ice elements. Additional surface breakup, reflections, and particles were generated in comp, along with projections of on-set photos to add detail to the CG vehicle.



### 1:01 - Scorpion - Van Suspended in the Ice Wall

To tie in with the actors' reactions, I projected the plate's van and people onto some layout geometry, animating its slight drop in 3d. This geo went back to the dynamics team to collide with the simulated firestream elements. Paint, roto, and ice cavern elements were also received and integrated with extensive relighting, reflections, and stock footage smoke.



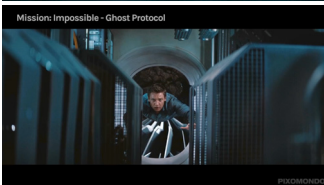
### 1:03 - Scorpion - Dog in the Well (3 cuts)

A trio of dry-for-wet shots, using the normals pass from simulated water surfaces to reflect and refract the plate imagery. Extensive warping of rendered elements helped to tie in the CG to the dog's movements. Roto and some painted wall elements were combined with animated lighting passes and stock particulate elements for the diffused submerged look.



### 1:09 - Scorpion - Rat on Sly's Shoulder

To correctly mask the CG rat's feet on opposite sides of the actor's shoulder, I projected roto on some simple geometry for a Deep holdout. Special attention was given to matching the CG's wet, oily fur to a practical reference shot on set, as well as the object in his mouth which was retextured in comp.



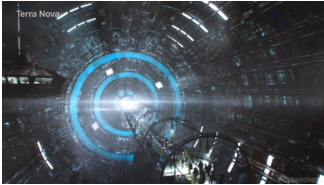
### 1:11 - Mission: Impossible Ghost Protocol - Entering the Mainframe

The tunnel Jeremy Renner is floating through had a large cutaway above where the wires and support rigs travelled, casting shadows all around the set. After rotoscoping the actor and the servers in the extreme foreground, I 3d and planar tracked the scene and replaced nearly everything with clean-painted still imagery.



**1:15 - Get Smart - Laser Room Wire Removals (2 cuts)**

Originally shot with orange wires as placeholders for smoke-revealed security laser beams, art direction and edit changes required the wires be painted out. With some of the roto provided by another artist, I planar tracked numerous patches to replace the room and portions of the actors with painted and warped still frames.



**1:19 - Terra Nova - Time Portal Wide Shot**

With roto assistance from another artist, I combined the blue screen plate of actors on a short catwalk with nearly one hundred layers of CG, stock smoke elements, and custom particles to build this establishing shot of a particle accelerator room housing a Time Portal.



**1:24 - Terra Nova - Running through the Time Portal**

Working closely with the VFX Supervisor, I designed the look of the Time Portal for the series. After many iterations of much more violent-looking designs, we ended on this "Rapids of Light" version, with a series of fractals, displacements, and 2.5d particle smoke laid over the morph between plates.



**1:31 - Sleepy Hollow - Headless Horseman**

When the clean plate for this shot proved to be too different from the main, I stitched and painted multiple still frames of the background into a panorama, with some painted highlights to sync with the on-set lightning flashes.



**1:34 - Scorpion - Missile Silo Set Extension**

Originally planned as only an extension of the missile and silo floors below the actors, this shot became more complicated when time did not allow for a perfect matchmove to lineup the CG with the plate throughout the camera move. Ultimately everything in the shot was reprojected and/or spline warped to blend the seams where the two met.



**1:37 - Scorpion - Rocket Launch**

Part of a series of matching cuts which featured a stationary, practical rocket set piece, I isolated and modified individual sections of the CG counterpart with the Point Position pass to maintain continuity. RGB-lit CG smoke renders and normals passes were used for setting the fire light from the exhaust in comp.



**1:41 - Scorpion - Fireball Escapes Through Roof**

For this finale of an underground tunnel explosion sequence, Mantra renders of multiple fire sims, dust, debris, interactive light, and reflections were brought together with additional stock elements. A brief shockwave distortion was driven by a torus primitive animated to expand through the scene's layout geometry.



**1:43 - Underground - Plantation Home on Fire**

More than 60 layers of stock flame and smoke elements were keyed, retimed, warped, and placed here to set the building ablaze, each positioned based on a point cloud reference solve. Some additional crew and equipment paint work was provided by an outsourced vendor.



**1:46 - Underground - Harriet Tubman Plate stitch**

This was a **seven minute** monologue, blending two takes of hand-driven crane moves across 3,600 frames, and revealing untouched imagery at head & tail. Matchmoves & roto were outsourced. I built geometry, projected, painted, and morphed the actress and every object in the scene individually, then rendered through an animated camera blending between plates. A second artist helped morph her hands.

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[vimeo.com/bencampanaro/2018reel](https://vimeo.com/bencampanaro/2018reel)



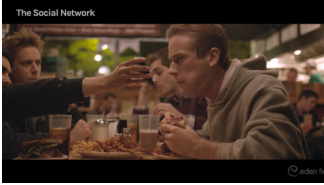
### 1:52 - Unsolved - Interrigation Room Cleanup

To remove the steadicam operator's reflection, I placed cards in the scene at both the mirror's surface and the reflected wall, as if looking through glass into a duplicate room. Clean wall patches were stitched, painted and warped to match the surrounding footage, with a layer of replacement mirror texture over the top. Matchmoves and roto were provided.



### 1:57 - Underground - Market Street Set Extension

CG, matte paintings, some paint, and actor roto were provided to replace this street location beyond the orange and yellow buildings. Substantial replacement of textures was handled in comp, along with the extraction and placement of a dozen stock crowd elements. The left lamppost was reprojected to stabilize the setpiece when hit by the actor.



### 2:02 - The Social Network - Actor Twinning

The plates for this twinning split-screen of Armie Hammer were shot without motion control. I stabilized the camera moves from each plate, then spline warped them as necessary to stitch both clips into a single moving panorama. After matting any actors and objects that crossed the seam, I introduced a smoother, signature Fincher camera pan across the scene.



### 2:06 - Zoo - Elephant in the Forest

The plate for this shot required some heavy paint work to remove rigging and open the clearing for the CG Elephant. Surrounding foliage was reconstructed with multiple layers of cards to allow control over edges. 2d particles and stock elements added some additional atmosphere and ground interaction.



### 2:10 - Zoo - Panther Attack (3 cuts)

The challenge of this sequence was balancing visibility of the CG panther while still integrating with the harsh lighting on set. Individual scene lights were provided as AOVs for final mixing in comp, along with shadows and reflections on the glossy floor. Special attention was given to painting interactive shadows on the actors and matching motion blur to the plate.



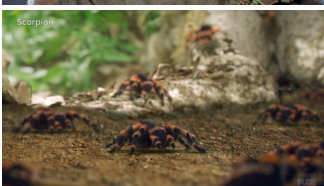
### 2:14 - Sleepy Hollow - Apocalyptic Fight

Part of a dream sequence, extensive grading work helped match this blown out footage with the exposure of surrounding shots. On-set falling ash keyed from the plate and roto'd actors were layered with dozens of fire, smoke, lightning, blood, and ember stock elements. A CG sword blade image and cloud matte painting were provided by other artists.



### 2:16 - The Walking Dead - Zombie Kill

After roto'ing the attacker from a plate hitting a sand bag, retimes helped sync performances and heighten impact. Subtle comp details included head jiggle, ripping flesh, and offset 3d layers of hair, skin, and skull cavity. Detailed spline warps refined tracking on the face and clothing. An early test comp, matchmove, and CG blood element for the jacket were provided by other artists.



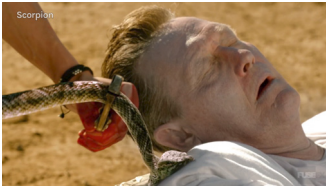
### 2:18 - Scorpion - Tarantulas

With a ground texture provided by another artist, I reconstructed this shot from multiple plate stills to have a locked depth of field. The hairy CG tarantulas—rendered in a single pass—were individually isolated with Deep crops and repositioned in comp with corresponding depth blur and 2d shadows. The two foreground spiders were extracted from live footage.



### 2:21 - Scorpion - Toby Holding the Snake

Paint work to remove the snake prop used on set was outsourced for this shot. Preserving the prop's head, I dialed in VRay AOVs for the CG body and tail, matching the exposure and bloom to the plate. Spline warps helped refine slips in the matchmove around his fingers.



### 2:23 - Scorpion - The Snake Strikes

In the plate, a prop snake (removed by an outsource vendor) was slowly pushed into a dummy shoulder. CG artists animated a striking snake body, which I merged with warped still frames of the prop snake's head. This blends to a retimed prop snake head & shoulder once it makes impact. Comp tweaks include actor breathing removal, warped jowls, and snake eye movement.



### 2:24 - Scorpion - Pulling the Snake

CG artists provided an animated CG snake body visible behind the pliers, which I dialed in to match the flexible snake prop used on set. To give some more life to the prop snake's head in comp, I added a nictitating membrane over the eye, plus treatments in the mouth for fleshy subsurface lighting, wet specular highlights, and some subtle dripping venom.



### 2:25 - Time Warner Cable / Game of Thrones - "Dragon" - Searching the Streets

Placing the dragon from "Game of Thrones" into this plate of a busy sidewalk was all about dialing in bounce lighting, interactive shadows, and the subsurface qualities and translucency of his wings. Extra care went to finding a balance between matching the actual focus depth of the plates versus what kept the viewer's attention on the dragon's performance.



### 2:27 - Scorpion - Sharks Attack the Buoy (2 cuts)

Shot in the parking lot water tank at Paramount, detailed roto from other artists helped me integrate Mantra renders of CG water and sharks into these shots. In comp, I mixed base color gradients with the AOVs to dial in the spec and reflection properties. Caustic patterns on the sharks were generated from Point Position data.



### 2:31 - Scorpion - Skydiving Sequence (4 cuts)

This skydiving sequence was shot in a parking lot with stunt actors on wires a few feet off the ground. Matchmoves, Terragen backgrounds, paint and some roto mattes were provided by other artists. Each actor plate was reprojected onto cards which I animated in Z, staging their positions based on the script and scene dialogue.



### 2:36 - Scorpion - Walter Splashes Down

A Terragen water surface and multiple Houdini splash renders were provided for this shot's background. Comp work included extensive relighting and sculpting of shadows—required to exaggerate the dimensionality of the water explosion. Atmospherics, high-frequency camera shake, and lens treatments helped match the quality of the image to surrounding shots.