






	<p>KARR EXPLODES nuke composite Combined V-Ray passes to build base robot (KARR) model and Mustang model. However, I was missing several passes (self illumination), so I subtracted every pass I had from the beauty to get a "remainder pass" that I added back in.</p> <p>I then did a lot of tweaking to KARR's self-illumination to get a nice glow. I also focused on the glow that engulfs KITT as he smashes through, making it "super-real" – as was the style of the show.</p> <p>The explosion/debris is a combination of plussed stock and fume elements. Toss in a few lens flares, iDistort for heat distortion, and a background matte that I put together from stock photos and viola.</p>
	<p>AIRPLANE LANDS nuke/ae (after effects) Again, V-ray passes for the plane and background. Some glow to self-illumination. Added rain hit passes to the plane. Turned down specular (it was crazy high). The original EXR was underexposed, so I brought up the background a lot and kept the plane dark to go for a sillouhetted, high-key night look (and hide it's CG feel).</p> <p>No GI pass (sigh) and no HDRI lighting were provided, so I added a lot of dust elements in the FG, and used Trapcode Particular in AE (with some simple hand tracking in 2.5D) to add a lot of rain.</p> <p>A common technique I use in TV when 3D artists simply don't have time for heavy pass renders is to add elements of visual noise to busy the eye and draw attention away from CG flaws.</p>
	<p>KITT TRANSFORMS nuke/photoshop No clean plate was shot, so first I took several frames over time and used them to make a clean plate in Photoshop. I then matched and tracked the clean plate over the original footage.</p> <p>I wanted to retain as much of the real smoke and movement as possible, so I rotoed out the actual Mustang, replacing it with clean plate footage. Some CC was necessary to match the CP to the source footage.</p> <p>3D model was a standard V-ray composite with some manual keyframing to tweak perspective. I used a hand keyed fractal/bezier solution to add some additional smoke behind KITT (to help mask bits of the original car).</p>
	<p>MACHINE GUN nuke/ps Tweaked the BG plate (added the hole) in Photoshop. Comped in gun, reflection, gun flashes.</p> <p>Lit a simple Ford Shelby 3D model matched to actual vehicle in Nuke 3D chain to build the reactive light flashes from the gun.</p>

	<p>PERIOD PIECE nuke/ps</p> <p>Several shots like this in my reel. This feature film was shot on an 8-bit 422 format. Keying was a challenge. Since the target goal was black and white, I found that a mixture of keylight/IBK/primatte/Red Keyer in Nuke worked to pull a decent alpha. I then shuffled luminance into the blue channel to clean up noise, with the alpha downstreamed after that. Some convolve operations and lightwrap were needed to cover up the lossy signal in the edges.</p> <p>BG is a matte built from stock photos in Photoshop.</p>
	<p>WESTERN MAGIC shake/ae</p> <p>A demo I made for a feature pitch. Subject was shot in HDV with no green screen. So this was a full roto, with an optical flow retime, and color grading.</p> <p>This was done several years ago, I used Shake prior to Nuke.</p>
	<p>KNIGHT RIDER DRIVING COMP ae/nuke</p> <p>I led a team of 5 artists that did about 100 of these a week. The entire show was shot 100% windowless due to crew reflection problems, so we took a lot of still photos of the real KITT and used those elements to recomp-in the windows (maintaining details like stickers and decals).</p> <p>I also devised a system using a 185° lens on a RED camera on a machine-operated head to capture plates that we “unwrapped” in Nuke on a 3D sphere. This allowed us about 160° of plate adjustment in 2D. So we could do 45° angles, back angles, side angles, all from the same footage.</p>
	<p>KNIGHT RIDER EXPLOSION ae</p> <p>Explosion in this shot was done by Brandon Flyte. Actor was not well covered by green screen and artists were having difficulty with roto, so I stepped in and rotoed the actor fully in AE.</p>
	<p>NUCLEAR POWER PLANT ae/max/ps</p> <p>The power plant is a matte painting I did using some stock images and raw painting with my tablet. I also added the smoke stack element. 3D missile was NOT done by me.</p>

	<p>TWO STORY BUILDING ae/ps Showrunner wanted a second story and different mountains, so I painted a second story in PS, and comped-in different mountains.</p> <p>The key was tough in some areas, a lot of luma keying and a little roto, too.</p>
 <p>ROTO & MATTE ELEMENTS</p>	<p>WATERFALL ae/ps I matte painted the mountains surrounding the stock water element. I also contributed to the roto of the subjects. Other artists also helped tag-team the roto.</p>
	<p>HEADS-UP DISPLAY illustrator/ae I was original brought on to <i>Knight Rider</i> as the sole designer of the Heads-Up Display for KITT. I designed all the raw elements in vectors in Illustrator, then templated everything in After Effects. I used a significant amount of AE scripting to automate the dials, placement, and animations, allowing artists to use templates I built to quickly build chat windows, fly-ins, etc.</p> <p>I ended up building a six person team to handle up to 80 of these shots a week.</p>
	<p>HEADS-UP DISPLAY CU illustrator/ae Here's a close-up example of some of my detail work on the Head's-Up Display. All of the dials were pre-rendered elements with a lot of detail. I knew fans would want that, so I based my designs off of a lot of research in the world of high speed auto tech.</p> <p>I also directed the "template shoot" of all the KITT elements used throughout the season.</p>
	<p>KITT ORB ae I was also responsible for "KITT's centerpiece," his "eye" or orb. Originally it was going to be 3D, but that was just too slow for TV, so I, along with the help of talented artist Kyle Spiker, used distortion mapping and Trapcode Sound Keys in After Effects to build a 2.5D KITT orb. We could then input any of Val Kilmer's audio into the file to build accurate sound waves.</p> <p>I also fought to keep in the original KITT sound bars, where are nestled in the center, like KITT's "brain."</p>

	<p>SOUND SCAN ae Given the task of visualizing a device that can “print” sound waves in the air, I used Trapcode Form and a lot of tweaking and sound mapping to build the motion graphics for this series of shots.</p>
	<p>DNA CHAIN cinema 4d/ae/director I helped 24 frame on the <i>Knight Rider</i> pilot by building a series of 3D motion graphic elements frequently used in the show.</p>
	<p>STORYBOARDING ps As 2D lead, I met weekly with the writers/showrunners to do a VFX walkthrough of each episode in editorial.</p> <p>To convey this info, at the peak of 2D work on <i>Knight Rider</i>, I would take stills from the show and sketch out every single motion graphic element, printing out storyboards for the artists to use as reference. This was a huge creative timesaver for them!</p>
	<p>ON-SET SUPERVISOR/LEAD CREATIVE This ABC pilot wanted to do more sophisticated “street-level” DC background replacements. So I helped come up with a new way of doing backgrounds. Rather than using stock elements, we flew a small RED crew to DC <i>after</i> principal photography.</p> <p>Using Google Earth we pre-selected locations and matched up camera data that I recorded on set to get amazing DC plates with unprecedented quality.</p>



ON-SET SUPERVISOR/TD/COORDINATOR | nuke

Continuing our background replacement innovations, I selected a corner in Glendale with a dead end to use as the location for this complex steadicam shot. Doing research, the buildings in Glendale are similar in height to those in DC. I also knew a giant Green Screen was out of the question (time/money), so everything was planned with roto in mind.

3D tracking was used to match-move the background plate, and I built a Nuke workflow that enabled multiple artists to work concurrently on this singular shot to combine matte elements.



ON-SET SUPERVISOR/TD/COORDINATOR: nuke

Shot on a Panavision Genesis with a 600mm lens, this is my all-time favorite background replacement shot!

For this shot I insisted they go HDCAM SR 444 and give us the Panalog source. The DP had to blast out the highlights in order to maintain key on the African-American skin of the actor that walks in at the end.

But using Nuke at 32-bit linear, we were able to clamp in most of the over-exposed information, which came in really handy for pulling keys in the leafy areas.

The biggest challenge was adding the buildings. The lens was so long, and there was a lot of heat distortion, so 3D trackers were crashing and burning. We also tried projecting on geometry in Nuke, but the parallax just didn't seem right.

In the end, I built a gizmo in Nuke that takes a layered PS file and "fakes" parallax via several exponential modifiers.

The parallax on the buildings is subtle, but without it, the shot just wasn't working at all.