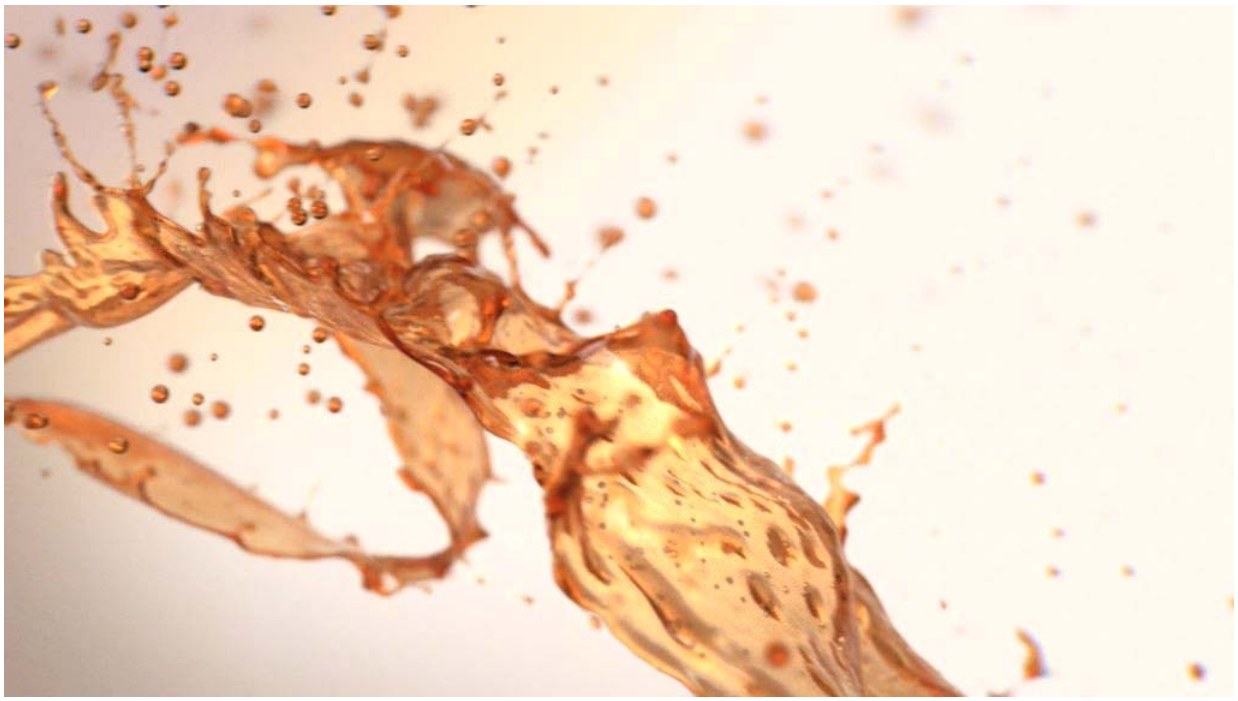
Fusion CI Studios Shares a Coke with Fin Design!

Coke bursting from a bottle, launching through the air in an elegant, dynamic, sculptured cg splash -- super slow-motion and close-up! This looks like a job for…..
dynamic effects specialists, Fusion CI Studios!



When Fin Design + Effects, Sydney, Australia, (http://www.findesign.com.au) was tasked to create this kind of effect for an end tag for the Coca Cola “Share a Coke” campaign, they turned to Fusion to create the cg fluid simulations because of our experience with macro-photography style CG fluids. Fusion has developed an extensive library of technologies and methods for these kinds of effects. Our clients come to us for challenging fluids work, so each project has unique, demanding requirements that pushes the bounds of existing technology and propels us to develop ever more advanced tools to meet creative expectations -- the resulting extensive library allows us a good ‘leg-up’ on new project work. Consequently, Fusion provides its clients with outstanding effects for about the same amount it would cost them to hire an experienced effects artist, while creating a far superior product.

The campaign invited people to send photos of themselves to be featured on TV- the photos would be grouped according to first names. Fin’s task was to find a design solution to showcase the photos that wouldn’t alienate the core concept and that would keep the pictures “Hero.” Fin imagined all the places one would normally see pictures of friends & family - on our phones, in a picture frame, on social networking sites, in a snow-dome, in a locket, etc – and created a series of shot options for the campaign’s TVC’s. But when Ogilvy asked Fin to also create the new Coke endtag – “a celebration of the pop & burst Coke moment as the lid comes off the bottle,” Fin turned to Fusion to generate the fluid simulations.

Coca Cola is one the world's most well-developed and iconic brands -- everyone from a villager in a remote area of a developing country to Donald Trump knows exactly what coke looks like, so when it's moving super slow with the camera super close-up, the cg fluids must be stellar. And of course they have to look like something you'd be excited about drinking -- this is no small task with CG fluids, which are very challenging to create realistically and far harder to make look tasty.

Fusion was asked to create 2 kinds of mid-air cg fluid splashes for Fin: a splash bursting from the Coke bottle (which had to be sculptural and beautiful while also feeling explosive, pushing toward a chaotic

feel), plus a variety of curving splashes that Fin's team could compose in 3D space in the comp to create a dynamic "Coca Cola space". So it was up to Fusion to experiment with digital "throws" of fluid and work up a palette of shapes from which Fin's creative director could give further direction, and then select elements to build the 3D composition. To do this kind of work, Fusion's team uses RealFlow along with a suite of in-house plugins developed by their VFX Supervisor, Mark Stasiuk.

Fusion has created a wide variety of broadly similar mid-air splashes:

- Iconic crown splashes: http://www.fusioncis.com/research/splashes
- Milk & juice splashes, Minute Maid NutriBoost: http://www.fusioncis.com/press/MinuteMaidNutriBoost_final_H264.mov
- Paint splashes, Epic Mickey: http://www.fusioncis.com/projects/special-projects/epic-mickey

Fusion's basic splash technology makes use of our "smorganic" tool, developed to prevent CG fluid from breaking up into ugly swiss cheese-like holes that is typical of CG fluids: http://www.fusioncis.com/pr_smorganic.html

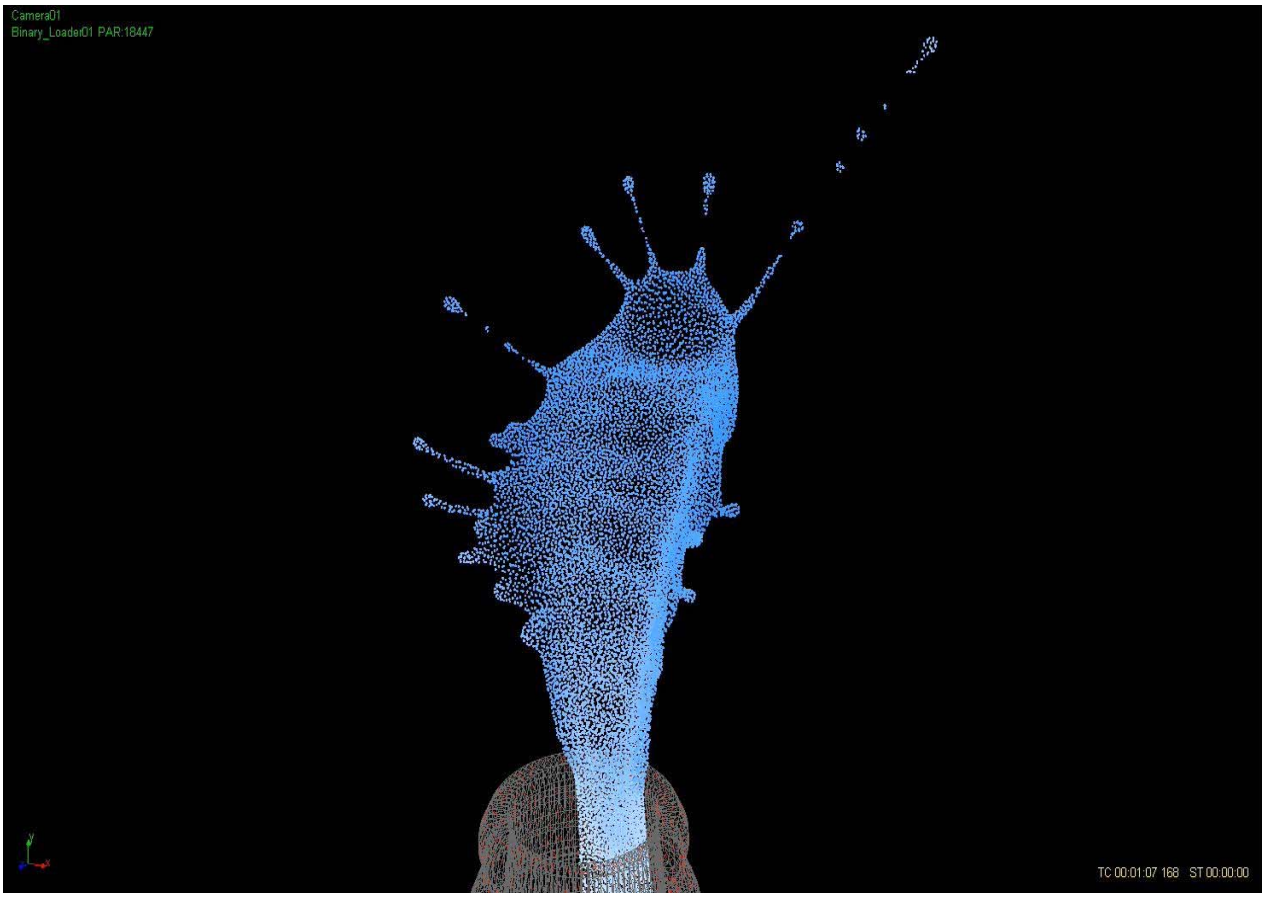
If you're a RealFlow user you can think of Fusion's smorganic as RF's sheeter daemon on steroids. In addition, our splash tool finds flow edges and from these creates the little droplets and tendrils that are so characteristic of small-scale splashes. For the bursting splash, the shape was going to be so chaotic that our tool would create those features everywhere and turn it into a truly crazy shape, so we had to develop artist-friendly ways of controlling where the tendrils came off. We found a simple solution by just having artists paint over the particle cloud, highlighting those zones that would allow the creation of tendrils. Once this was done, it was a matter of creating interesting splash shapes using an array of tiny deflector planes just inside the mouth of the bottle and then running a matrix of tests to see what shapes were generated. At Fusion we're big fans of RealFlow because of the tight integration for Python scripts and c++ plugins, and the smooth and simple workflow compared to other simulation packages. This made the customization of our in-house tools easy and also made the wide variety of fluid "throw" experiments.

Here's a link to a playblast of the final version selected by the Fin Design team:

www.fusioncis.com/press/shareacoke/bottlesplash.mov

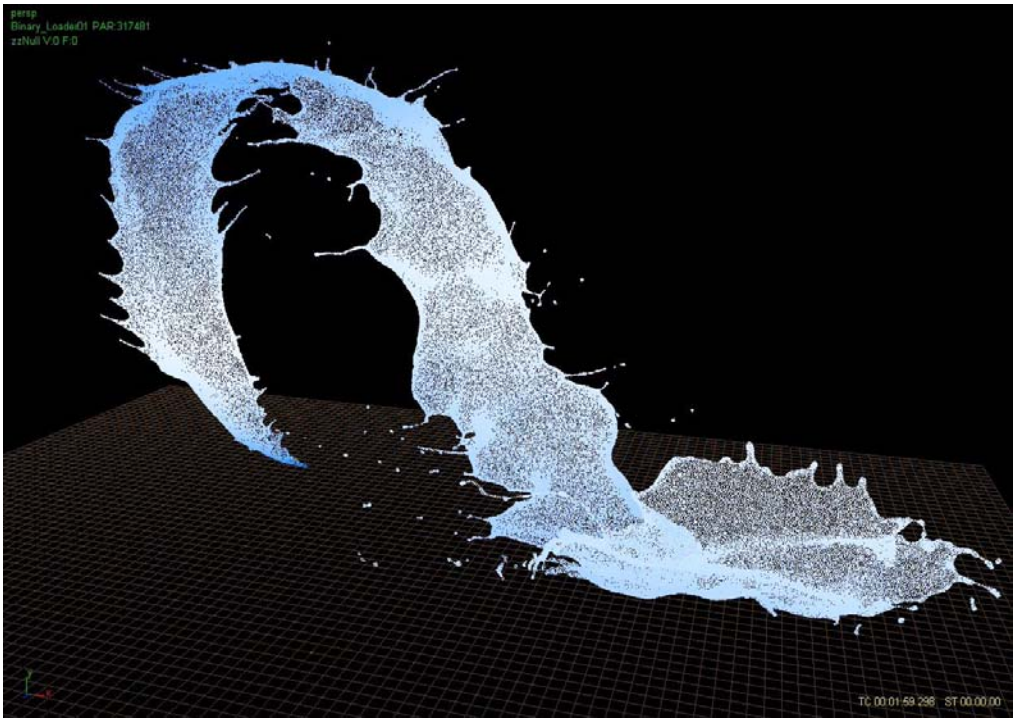
The arc-shaped splashes had a shape more like what we were used to creating, so our tendril tool worked as-is for those, allowing us to auto-select the flow edges and set the number and spacing of the tendrils. The challenge with these was to get controlled, curved shapes. For these we developed a new version of a path-follow tool to guide the flows in a natural way along a path in space. Again, RF users could view this as the Dspline tool on drugs.

An early version of a splash element with this tool created an element that didn't end up being used in the spot, but illustrates the sort of look when the path was not too highly curved:



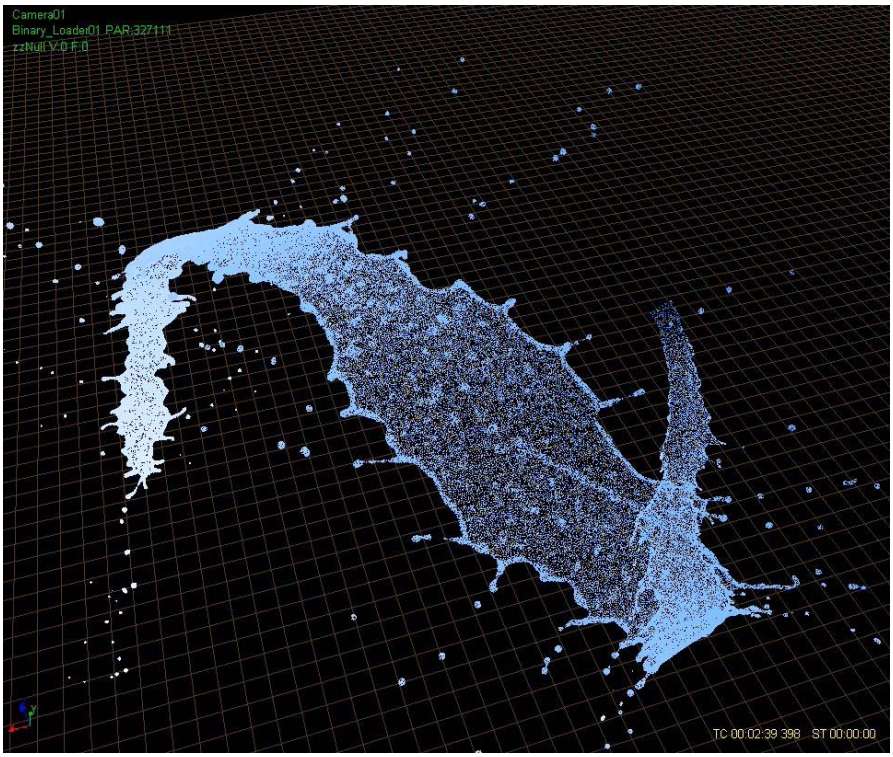
www.fusioncis.com/press/shareacoke/arcsplash_simple.mov

But when we really cranked the path-follow tool, we could get this kind of flow that you'd have to be in outer space to even think about re-creating practically (see below):



www.fusioncis.com/press/shareacoke/arcsplash_spiral.mov

The above flow was a little too extreme to be used in the spot, but with some tweaking we got a spiral-sweep going that had a sense of more natural flow while still retaining the magic that can only come from CG:



www.fusioncis.com/press/shareacoke/arcsplash_circularsweep.mov

Fusion supplied Fin's team with a library of about 15 of these kinds of fluid simulations delivered as mesh sequences, from which they picked out their favorite moments, added tiny particle-type bubbles to the fluid interiors, and built up the set of vignettes to create the final spot.

See it on Fin's site here: http://www.findesign.com.au/projects/coke-share-a-coke/
And on Fusion's site here: http://www.fusioncis.com/press/shareacoke/coke_shareacoke_h264.mov

Credits:

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