

## Centre of 'Gravity': Effects studio that put the stars in space

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Special Effects Supervisor for The Framestore, Tim Webber, is interviewed in the Soho offices of the leading visual effects company, in London, on January 29, 2014

In a London basement, cutting-edge technology is being used to make a computerised Sandra Bullock climb into her rocket. But the team who put her there in "Gravity" have spent the morning working with more basic tools of the trade—syrup, cheese and chocolate.

"We're trying to create a melting flesh effect for the new Tom Cruise movie," said Richard Graham, [visual effects](#) project manager at Framestore, the British company that has helped "Gravity" collect 10 Oscar nominations.

"Golden syrup and chocolate make really good blood if you mix them with lots of red food colouring," Graham told AFP in an interview at Framestore's sprawling studios, behind the facade of an ordinary-looking office block in the Soho district of central London.

"We've also been blow-torching different cheeses to make them bubble. Burger cheese didn't work that well because the fat content's not high enough. Mature English cheddar was a lot better."

The sticky mess of foodstuffs will appear for only a fleeting moment, grafted digitally onto the actors' skin, in the forthcoming movie "End of Tomorrow".

But that's nothing unusual for Graham and the other visual effects (VFX) artists who spent a painstaking three and a half years creating the stunning computer-generated space vistas of "Gravity".

Framestore staff toiled for a year building a digital replica of the International Space Station (ISS)—and then tore their hair out trying to work out how to blow it up.

Tim Webber, the film's VFX supervisor, remembers feeling exhausted after the very first meeting with director Alfonso Cuarón.

"So much about it was so different to any film before," Webber told AFP. "The massive involvement of visual effects changed everything about the film-making process."

An extremely complex shoot saw Bullock and co-star George Clooney spend hours suspended in rigging at Shepperton Studios, west of London, or else trapped in a cage filled with two million tiny LEDs designed to simulate the harsh light of space.



CEO of The Framestore, William Sargent, poses for a photo in the Soho offices of the leading visual effects company, in London, on January 29, 2014

Time Magazine named this innovative "lightbox" as one of their top inventions of 2013. But like the cheese in "End of Tomorrow", other VFX tricks used in "Gravity" were more rudimentary.

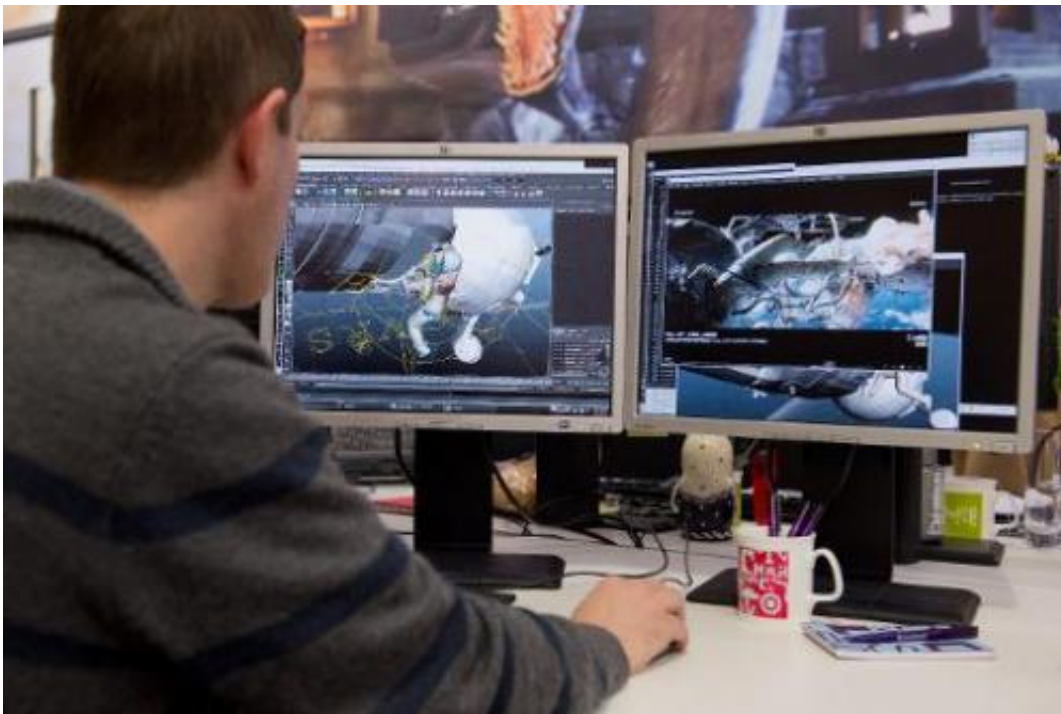
"We had someone hit Sandra Bullock over the head with a broomstick," Webber recalled.

"She was supposed to be flying down the ISS and bumping into the walls,

so we had to get her to react as if she'd bumped into something. There was a lot of low-tech stuff going on alongside the high-tech stuff."

Some 500 VFX staff worked on the movie, many of them poring over NASA videos for hours in a bid to make the portrayal of zero gravity as authentic as possible.

Other parts of the film, Webber readily admits, required larger leaps of imagination. Few people have seen fire in space, for example—so huge explosions were extrapolated from a YouTube clip of an astronaut lighting a match.



A technician shows some of the design behind key scenes from the hugely successful film 'Gravity' in the Soho offices of the leading visual effects company, Framestore, in London, on January 29, 2014

In most shots, only the actors' faces are real—the space station, stars and even the suits were generated by computers in London.

"Gravity" is one of a growing number of Hollywood blockbusters to have had their computer-generated imagery (CGI) magic worked in the British capital.

"You might think it was made in Los Angeles," said Adrian Wootton, chief executive of the Film London public agency. "But it's absolutely a film that's been made in London. It's a fantastic ad for us."

Crammed between Soho's sex shops, gay bars and trendy restaurants are six of the world's eight biggest VFX companies, Wootton told AFP.

Soho firms such as Double Negative and The Moving Picture Company have produced the effects for a string of ambitious movies in recent years, including "Inception", "Life of Pi" and "Prometheus".



A technician shows some of the design behind key scenes from the hugely successful film 'Gravity' in the Soho offices of the leading visual effects company, Framestore, in London, on January 29, 2014

It all started, Wootton said, with Harry Potter. The series brought a solid decade of big-budget film production to the capital from 2000.

Soho firms shared the VFX work and ploughed the proceeds into new technologies, cementing London's reputation as a world leader in computer wizardry.

Generous tax incentives have also helped Soho win business—to the fury of Hollywood's VFX artists.

They are set to protest at next month's Oscars over subsidies which have steadily wooed productions from Los Angeles to London and rival VFX hubs like Toronto and Vancouver.

But Hollywood's loss is London's gain. VFX is the fastest-growing component of the British film industry, according to a government-commissioned report published in 2011.

At least £287 million (\$469 million, 247 million euros) is now spent on VFX in Britain each year, the British Film Institute says.

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