

Futureworks  
(www.futureworks.in)

Autodesk® Flame® software

I've always been a huge Flame supporter. From the beginning, we knew we needed an online visual effects system that could handle all our VFX needs. Flame has all the power we need.

—Abhishek De  
VFX Director  
Futureworks

# Futureworks Employs Autodesk Flame to Fire Up Bollywood.

## Flame is the Key Visual Effects Tool in India's First 4K film.



Image courtesy of Rose Movies – Eros Pictures.

As Bollywood, one of the fastest-growing film markets in the world, continues to evolve, its offerings have become increasingly sophisticated, both aesthetically and technically.

Futureworks, a leading VFX and post facility based in Mumbai, India, recently finished over 500 visual effects shots for *Drona*, directed by Goldie Behl and starring the award-winning Abhishek Bachchan. The company, only one year old, is in the vanguard of the new wave of high-end digital post production facilities throughout the region. *Drona*, which was released in October 2008, is a modern fantasy fable capturing a young man's rise to heroism amidst seemingly insurmountable odds. The film is a breathtaking journey to a mystical world filled with intriguing characters, sorcery, magic and adventure, and with over 1,500 visual effects shots, is the first 4K feature film to come out of India.

Abhishek De, VFX Director at Futureworks, explained why the facility chose the production-proven performance and reliability of Autodesk® Flame® software which helped to deliver industry-leading effects for *Drona*. "We started our facility last year with one Flame system initially, and added a

second system this summer," De said. "There's a lot of demand in Bollywood for online visual effects work, and we wanted a system that would give us as many features as possible."

### More Flame, More Features

A long-time Flame user, De has worked in the visual effects industry for over nine years. "From the inception of the facility, we wanted to invest in a Flame system for Futureworks," he said. "When we finally got Flame, we were amazed at how many features had been added to the software. Finally, here was a tool that could do all the VFX work we needed, and our online jobs as well."

When Futureworks began work on *Drona*, De knew that the facility would need the power of a second Flame system. "What I saw at the Autodesk roadshow really convinced me," De said. "I had seen some very interesting things that we could do with Flame in a 3D space, and many of those features turned out to be just what we needed for *Drona*."

Autodesk®

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De made it his mission to use as many of the features available in Flame as possible. "Our team is always looking for new features and how we can use them," De said. "Very few users exploit all of the features Flame has available, and it's become a comprehensive tool for handling a variety of tasks. You can do almost anything. We've used between 70 and 80 percent of the newest features on Drona, and with the upcoming VFX projects already in our pipeline, it will only be a matter of time before we use all of them."

With so many new features in Flame 2009, it's difficult for De to pick his favorites. "The 3D tracking is obviously very important, along with the ability to move the camera within 3D space," he said. "One of the best things about Flame, even the older versions, is that it's resolution-independent, which allows us to work in different resolutions on one desktop. In the old days we had to move back and forth between computers when working in more than one resolution, so this is an amazing time-saver."

## Working in 3D Space

For one crucial sequence in the VFX-heavy Drona, Futureworks was tasked with compositing high-resolution still imagery inside a 3D space in order to create action. "We started with extremely high resolution images that had been hand drawn and painted in layers," De explained. "The images needed to be placed

inside a 3D space and the film's director wanted the camera action to merge the images within the space, creating a storyline from the still, static images."

Autodesk Flame provided the great solution for quickly and easily creating the complicated sequence. "We were moving between characters and the elements of this high resolution imagery and actually telling a story with it," De went on to describe. "The sequence called for these very high resolution images to be composited in 3D and then to have the characters move around inside the space. In order to accomplish this, we needed a lot of horsepower."

Flame provided De and the rest of the Futureworks VFX team with tools needed to accomplish the complex sequence. "The 3D tracking in Flame is great—it's one of our most-used features and, along with the ability to move the camera within 3D space, it's what allowed us to complete our work for Drona on time," De added.

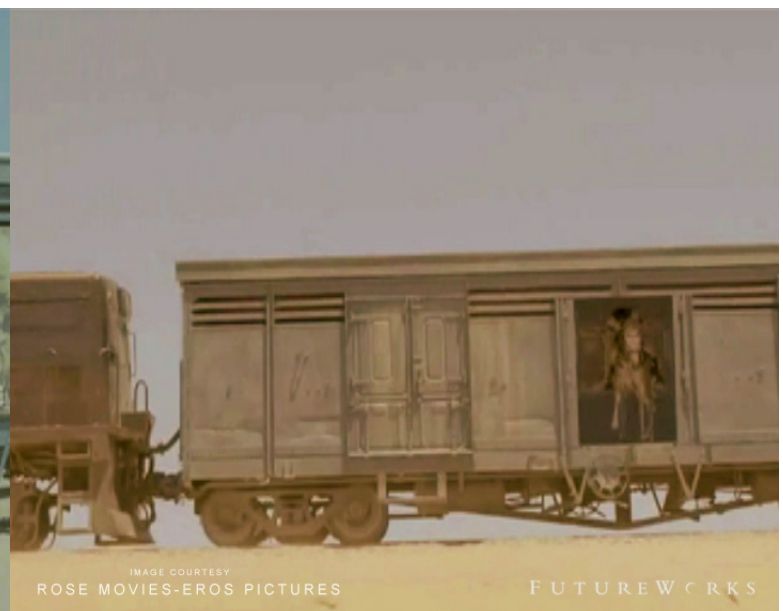
## A Solid Pipeline

To maintain a competitive edge in the rapidly evolving technical landscape of Bollywood, Futureworks employs an array of the latest tools and equipment coming to market.

In addition to two seats of Flame, the Futureworks VFX and animation pipeline is comprised of a host of software tools including Autodesk® 3ds Max® and Autodesk® Maya® software, which were used extensively on the title sequence for Drona, and Adobe® After Effects® software, along with Autodesk® Combustion® software for transferring assets from the VFX department to Flame. "We have over 20 feet of workstations," De proclaims. "In Bollywood, the turnaround time is very fast. We need to make sure we have the best tools available to produce the highest quality work on a very tight schedule. Flame lets us do that."

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Before and after images courtesy of Rose Movies – Eros Pictures.