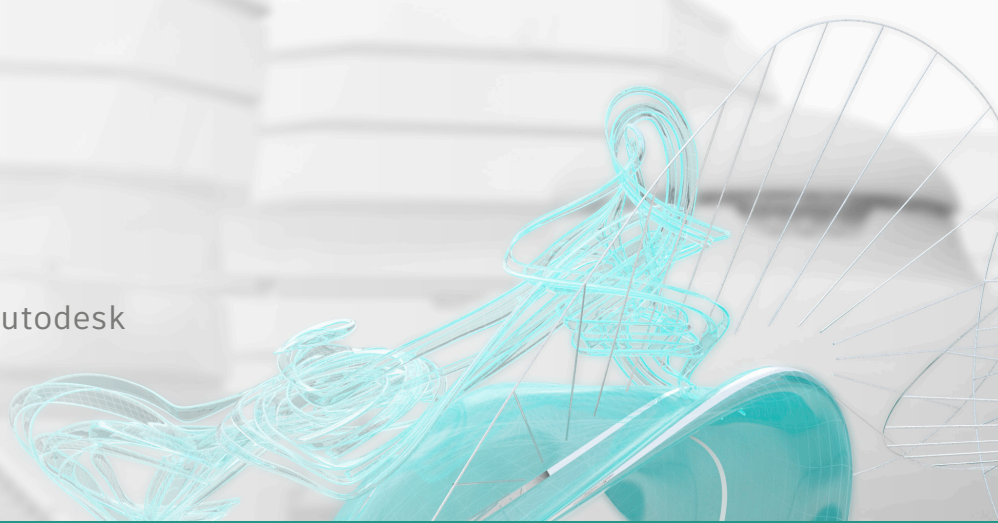


Primal(2019)

The making of the movie with Autodesk



Tau Films is an international creative content and visual effects group founded by John Hughes, Walt Jones and Mandeep Singh in the year 2014. With its headquarters in Los Angeles, the company has its roots in several parts of the world and is considered to be at the helm of diversity

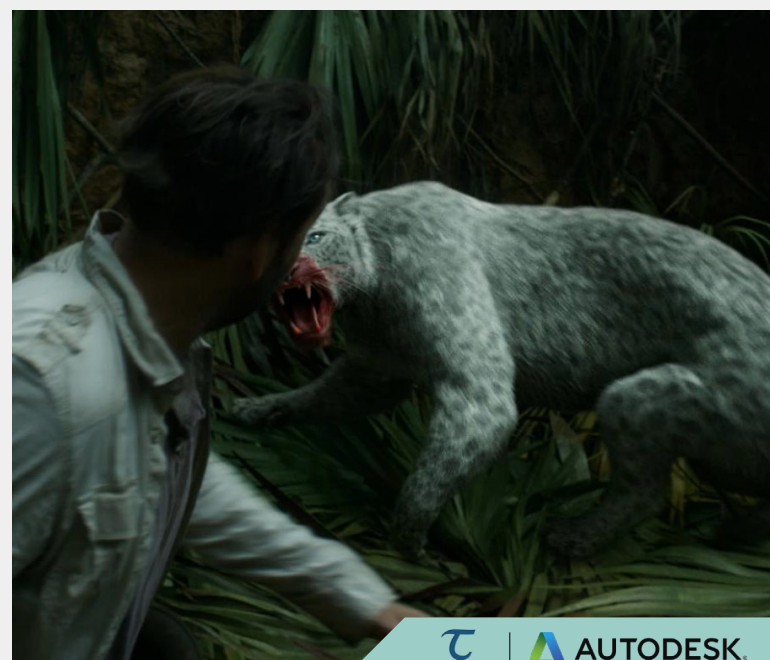
experimentation in creating content. Tau Films has several projects in visual effects under its name, including the blockbuster hit feature film Bahubali(2015), and other shorts & commercials such as the famous Vodafone Zoo Zoo adverts.



In the time of fast-paced cinematic evolution, the lines between real-life and animation blur quickly. Movies are fast becoming an exciting mix of both worlds, giving the audience an authentic, awe-striking experience. Tau Films has joined hands with Autodesk to fuel exquisite photo-realism in the Media & Entertainment industry through the 2019 Nicolas Cage starrer Primal. The seemingly life-like 400 lbs White Jaguar that is the focal point of the movie, was made possible through Autodesk's Maya and Arnold by a team of visual artists Walt Jones (VFX Supervisor), Vipin Negi (Animation Lead), Yogesh Sawant & Pranesh Chavan (Lighting Lead), Anoop AK (Pipeline Supervisor), Bharat Sabharwal (Rigging Supervisor), Jateen Thakkar (Compositing/Sequence Supervisor), and Rochana Jalan (Production Manager). The team built the initial layers using Maya while the blending and the smooth rendering was done using Arnold, an advanced Monte Carlo ray tracing renderer.

This is a free to use tool integrated with Autodesk Maya & 3ds Max to meet the demands of intensive VFX and animation production.

The action-drama feature starring Nicolas Cage, Famke Janssen and Kevin Durand in lead roles is an adventure-filled movie about a big-game hunter named Frank Walsh (Cage) who after capturing exotic animals from the Amazon, including a rare White Jaguar, books passage on a Latin-American shipping freighter. But there's a twist- the ship also holds a political assassin who is being extradited to the U.S in secret. A couple of days into the journey, the assassin plots his escape and causes a chaotic diversion by releasing all the captive animals and sending the ship into utter disarray. The team at Tau Films had the mammoth task of delivering 141 shots that included the White Jaguar in motion (both normal and bloodied), as well as two Woolly Spider Monkeys in 8 months. The biggest challenge in the delivery of these shots was to ensure photorealism in their actions in various scenarios. To begin with, the team studied the anatomy of the animals and their behaviour in different habitats before constructing them using Autodesk Maya



Few instances in the movie required simulations to interact with the CG Jaguar to create a life-like illusion and Maya ensured both effectiveness and efficiency in this case. The creators had the freedom to add and blend as many layers as possible with the Maya Arnold bundle, ensuring that minute details like the twitching of the nose could be built without disturbing the key motion of the character. The film's vision to deliver an action-packed movie with realistic animations and their authenticity with the cast was made possible without any cutbacks with Autodesk Maya and Arnold.

Through Arnold- the free add-on renderer, the resultant Imagery is accurate, pristine and yields predictable results.

The shots in Primal had a variety of environments that the creatures had to locomote through- the dark galleys of the ship as well as the dense rainforests of Amazon. This required Tau Films to switch to Maya's new render - layer system in Arnold that gave them the ability to dynamically override filtered collections of geometries, giving more time for creativity rather than spending hours manually adjusting the settings.



The biggest challenge of creating the jaguar and monkeys was to render them in differently-lit environments. Since the different locations require different levels of lighting, Arnold gave access to photo-realistic 3D rendering technology and the lights feature that employs realistic physically-based lighting and real-world materials to provide high quality render output. The software also ensured smooth rendering using existing hardware. Moreover, in a particular rainforest sequence, the White Jaguar had to interact with the elements in the background. This would mean that the primary layers like the fur would flicker.

A combination of physical-based light and other features that involved a lot of FX work was made possible by Autodesk Arnold HtoA engine and the Ray Trace Curve feature. The post-production house was tasked with providing a wide array of different shots for the film. Located in different parts of the world, the VFX assets, shots and elements need to be tracked from several locations. To integrate communication and ensure that the deliverables were monitored, Tau Films used Autodesk Shotgun, a software that streamlines projects, artists and assets running parallelly across teams of all sizes and multiple locations.

Shotgun enabled Tau Films



Manage productions and teams across locations



Customise project layout according to their requirement



Ensure project visibility at all times



Plan & schedule tasks



Generate accurate data for building new projects



The team at Tau Films made rapid prototypes for the monkeys and the jaguar using the skin, skeleton and muscle systems provided in Ziva Dynamics. This helped the primary and secondary Technical Animation teams to meet the art direction bar that Walt Jones, VFX Supervisor had set to ensure that the output rendered was nothing short of amazing. The movie required realistic animals for challenging shots that were intense, exciting and had to land the impact that was set up

through the background music, actors and screenplay. The hero-animal interaction was high and the flow of those sequences had to be authentic for the overall experience.

As a global post-production house, Tau Films has always built on their previous projects to increase the efficiency in the next. In Primal the story was lead by the creatures who had lots of fur & hair on them and had to interact with the real characters.

With Autodesk Maya, Arnold and Shotgun, Tau films could streamline and simplify the processes, giving them more freedom to be creative instead of spending time on the rendering process, switching between different software and keeping up with the work roles, scope and progress of each artist in multiple locations. This ensured that they were able to accurately implement the finer details in the film with precision.

Primal is a movie whose existence revolves around the animals, primarily the rare White Jaguar. The storyline pounces forward with the animals having let loose inside the confines of the ship. So, it was important for the VFX to blend seamlessly into the premise of the film, giving Frank Walsh (Cage) and the movie, a reason to move

forward while building tension with increased intensity. The animals that were built by Tau Films through Autodesk had to live up to the powerful fight sequences on the treetop and in the density of the forest and this was achieved through the kind of shots and the minute detailing of the CG animals.



The movie was a thrill ride for the audience, with Nicolas Cage receiving applause for his gruff, hunter demeanour and the rugged scenes with the creatures he captures, after a lot of visceral struggle. With more than 100 shots requiring CG and VFX that set up the movie's premise, Autodesk Maya and Arnold were used to work with layers, explore new shots and induce a sense of realness to the movie. For the movie to appear believable and on top of that, intense, it was important to get the anatomy, the kinematics and the physics of the animals right.

With apt research and the right software to ensure high-quality smooth renders in a short period, Tau Films and Autodesk provided the right platform for the movie to take off from.