

# Avatar. A Film for the New Generation

*An Epic Movie that Thumb Finger Generation will Enjoy a lot*

October 30, 2009 - 10:50

Avatar is an upcoming 3-D science fiction film directed by James Cameron, due to be released on December 18, 2009 by 20th Century Fox. The film is Lightstorm Entertainment's latest project, and Cameron's first fictional film in 12 years, having last directed Titanic in 1997.

The story's protagonist, Jake Sully (Sam Worthington), is a former Marine who was wounded and paralyzed from the waist down in combat on Earth. Jake is selected to participate in the Avatar program, which will enable him to walk. Jake travels to Pandora, a lush jungle-covered extraterrestrial moon filled with incredible life forms, some beautiful, many terrifying. Pandora is also home to the Na'vi, a sentient humanoid race that humans consider primitive, yet are more physically capable than humans. Standing three meters tall (approximately 10ft), with tails and sparkling blue skin, the Na'vi live in harmony with their unspoiled world. As humans encroach deeper into Pandora's forests in search of valuable minerals, the Na'vi unleash their formidable warrior abilities to defend their threatened existence.

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Jake has unwittingly been recruited to become part of this encroachment. Since humans are unable to breathe the air on Pandora, they have created genetically-bred human-Na'vi hybrids known as Avatars. The Avatars are living, breathing bodies that are controlled by a human "driver" through a technology that links the driver's mind to their Avatar body. On Pandora, through his Avatar body, Jake can be whole once again. Sent deep into Pandora's jungles as a scout for the soldiers that will follow, Jake encounters many of Pandora's beauties and dangers. There he meets a young Na'vi female, Neytiri, whose beauty is matched only by her ferocity in battle.

Over time, Jake integrates himself into Neytiri's clan, and begins to fall in love with her. As a result, Jake finds himself caught between the military-industrial forces of Earth, and the Na'vi, forcing him to choose sides in an epic battle that will decide the fate of an entire world.

## Filming and Effects

In December 2006, Cameron explained that the delay in producing the film since the 1990s had been to wait until the technology necessary to create his project was advanced enough. The director planned to create photo-realistic computer-generated characters by using motion capture animation technology, on which he had been doing work for the past 14 months. Unlike previous performance capture systems, where the digital environment is added after the actors' motions have been captured, Cameron's new virtual camera allows him to observe directly on a monitor how the actors' virtual counterparts interact with the movie's digital world in real time and adjust and direct the scenes just as if shooting live action; "It's like a big, powerful game engine. If I want to fly through space, or change my perspective, I can. I can turn

the whole scene into a living miniature and go through it on a 50 to 1 scale." Cameron planned to continue developing the special effects for Avatar, which he hoped would be released in summer 2009. He also gave fellow directors Steven Spielberg and Peter Jackson a chance to test the new technology. Spielberg and George Lucas were also able to visit the set to watch Cameron direct with the equipment.

Other technological innovations include a performance-capture stage, called The Volume, which is six times larger than previously used and an improved method of capturing facial expressions. The tool is a small individually made skull cap with a tiny camera attached to it, located in front of the actors' face which collects information about their facial expressions and eyes, which is then transmitted to the computers. This way, Cameron intends to transfer about 95% of the actors' performances to their digital counterparts. Besides a real time virtual world, the team is also experimenting with a way of letting computer generated characters interact with real actors on a real, live-action set while shooting live action.

In January 2007, Fox announced that the studio's Avatar would be filmed in 3D at 24 frames per second. Cameron described the film as a hybrid with a full live-action shoot in combination with computer-generated characters and live environments. "Ideally at the end of the day the audience has no idea which they're looking at," Cameron said. The director indicated that he had already worked four months on nonprincipal scenes for the film. Principal photography began in April 2007, and was done around parts of Los Angeles as well as New Zealand. The live action is shot with the proprietary Fusion digital 3-D camera system developed by Cameron and Vince Pace. According to Cameron, the film will be composed of 60% computer-generated elements and 40% live action, as well as traditional miniatures. The performance-capture photography would last 31 days at the Hughes Aircraft stage in Playa Vista, Los Angeles, California. In October, Cameron was scheduled to shoot live-action in New Zealand for another 31 days.

To create the human mining colony on Pandora, production designers visited the Noble Clyde Boudreaux drilling rig in the Gulf of Mexico during June 2007. They photographed, measured and filmed every aspect of the rig, which will be replicated on-screen with photorealistic CGI. Around 1000 people worked on the production.

More Information at [www.avatarmovie.com](http://www.avatarmovie.com). Image and Video Courtesy of 20th Century Fox. Video Encoding: 3Dup.com