



## HP Technology Powers DreamWorks Animation's Breakthrough 3-D Film, "Monsters vs. Aliens"

PALO ALTO, Calif., March 27, 2009 – Today the power of HP technology and the creative strength of DreamWorks Animation SKG, Inc. fuse to explode in 3-D action as the studio's highly anticipated film, "[Monsters vs. Aliens](#)," hits theaters worldwide.

Audiences will experience monsters that move like liquid, whose arms and mouths disappear, and whose bodies are transparent – characters that exist in part because of the unprecedented power of [HP workstations](#), [HP ProLiant blade servers](#) and other HP technology that enabled the increased demands of a new generation of 3-D filmmaking.

"Monsters vs. Aliens" required more than 40 million computing hours to make – more than eight times as many as the original "Shrek" and nearly double what it took to create "Kung Fu Panda."

"For us, this 3-D revolution is about immersing the audience into the movie," said Ed Leonard, chief technology officer, DreamWorks Animation. "HP's unique ability to deliver advanced technical tools that help to eliminate creative limitations has allowed us to dive headfirst into the exciting storytelling capabilities of stereoscopic 3-D."

HP technology aided DreamWorks Animation in utilizing the largest number of moving cameras on any of its films to date. The company was able to take creative elements in "Monsters vs. Aliens" to new levels by using several hundred HP xw8600 Workstations plus the largest and most powerful "render farm" – a grouping of HP ProLiant blade servers that quickly work in concert to process the animation sequence – ever used by DreamWorks Animation.

"DreamWorks Animation is constantly pushing the limits of creativity to bring the best visual realities to audiences around the world," said Phil McKinney, vice president and chief technology officer, Personal Systems Group, HP. "HP thrives on working with customers like DreamWorks Animation, who continually impel us to bring them the next breakthroughs in technology."

HP technology and the demands of 3-D

To help create visual effects for 3-D animation, DreamWorks Animation had to re-work its production pipeline and design tools to enable its artists to fully utilize the capabilities of 3-D.

Stereoscopic films, for example, require rendering separate left- and right-eye images, which meant that rendering requirements for "Monsters vs. Aliens" doubled those of its non-stereo predecessors. The increased push of pixels to the render farm also doubled the demands placed on the HP workstations of the studio.

To create the cutting-edge 3-D effects in "Monsters vs. Aliens," DreamWorks Animation

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artists used state-of-the-art HP technology to address the following challenges:

- Render the nearly 100 terabytes of disk storage.
- Render more than 30 sequences in the movie that would have taken more than 1,000 years to render on a single workstation.
- Create one of the most technically challenging sequences of the film involving a flyover of a town, including houses, hills and trees. In this shot, the background trees had to be broken up into more than 300 layers to render.
- Stage an explosion in one of the battle scenes, which required more than three terabytes of disk space alone.
- Bridge 300 physical miles: The [HP Halo](#) telepresence system and [HP Remote Graphics Software](#) allowed critical creative collaboration between artists located in studios in Glendale and Redwood City, Calif.

#### About HP

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