

NET Graphic Designers Animate in Mammoth Proportions

LINCOLN, Neb. (July 21, 2008) -- Imagine 12,000 years ago, towering 10-foot tall mammoths with 12-foot-long tusks roaming the grasslands of North America, including right here in Nebraska. Then, imagine drawing 5,600 pictures of these titans.

During the past three months, NET graphic designer Tom Floyd spent nearly 1,000 hours preparing various stages of hand-drawn two-dimensional animations for an NET Television-produced segment on the PBS series "NOVA scienceNOW." It airs Wednesday, July 30, at 8 p.m. CT on NET1 and NET-HD.

"I've done animation on and off throughout my life, but this was the first time I've ever done something this extensive. It was a creative challenge for me -- kind of like Disneyland for an old guy," said Floyd.

Floyd has been interested in animation since he was a child. He created his own flipbook animation in his mother's novels by drawing characters in a sequence of positions on the bottom right corners of each page of the book. The characters would come to life and create the illusion of motion as someone flipped quickly through the pages.

"I even made a flip book out of my mother's checkbook. She wasn't too happy about that," laughed Floyd.

The animation helps illustrate a mammoth mystery. During the summer of 1962 near Crawford, Neb., a surveyor stumbled across some unusually large fossils. A crew of University of Nebraska paleontologists, including then student Mike Voorhies, was working nearby and was called to investigate. The scientists soon realized the fossils were remains of a pair of Ice Age mammoths.

"We dug forward and found ribs and there was a nice skull. That was really exciting. Another few days of digging revealed there were actually two complete mammoth skeletons with their tusks tangled up," said Voorhies, now retired and emeritus curator of vertebrate paleontology at the University of Nebraska-Lincoln State Museum.

Despite their massive size, these mammoths were normally passive, according to Voorhies. But these two animals had struggled to their deaths, their tusks locked and intertwined like a pair of twisted tree trunks with one tusk poking into the eye of the other. Called the "Clash of the Mammoths," this is the only discovery of its kind in the world.

The segment of "NOVA scienceNOW" follows scientists as they try to solve this 12,000-year-old mystery and Floyd's animation helps illustrate their hypothesis. To create the illusion of life, Floyd had to redraw both mammoths in each frame using the previous drawing as a guide. When each drawing is played back in "real" time it creates the illusion of creatures moving.

"I called them 'leftie' and 'rightie' and I really had fun making their tails swish around and their ears flap. I got so caught up in the moment that I lost track of time while I was working," said Floyd.

Since no one really knows what a mammoth looked like or how they fought, the animation is Floyd's own interpretation. "I hope it's realistic. I watched fantasy films and video of how elephants move and fight, and made two models of the mammoths' heads. I studied lot of different animals to try and get the animation to look authentic," he said.

Traditional animation typically incorporates an entire team of people in the process, each responsible for a certain part of the work. There are animators, in-betweeners, clean-up, model checkers, inkers, painters and camera operators. Without a crew, Floyd did all of the preliminary work by himself, but later he and colleague NET Senior Designer Scott Beachler worked together to produce the finished animation.

"The poetry of the whole project is getting everything going at the same time. I was more on the creative side and Scott was better at the technical part," said Floyd.

Essentially, Beachler took all of the mammoth drawings and combined them electronically with his own painted backgrounds. He worked with computer "paint" programs and animation software to produce more animals and an environment that resembled the Nebraska Badlands where the mammoths lived long ago.

"I created a herd of mammoths from a single animal, changing color to make each one look a little bit different. I also added special-effects animation of rain and the mud that the mammoths eventually slip and fall in during their epic battle," said Beachler.

Together, the two designers produced about one-and-a-half minutes of animation that was incorporated with video and interviews for "NOVA scienceNOW." The series segment follows paleontologists as they search for clues that reveal just how and why the mammoths' violent clash doomed them.

Floyd was recently nominated for a 2008 Heartland Regional Emmy Award by the Heartland Chapter of the National Television Academy. He competed in the program graphics category for the graphic designs he created for the NET Television production "Murder House."

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NET Television:

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