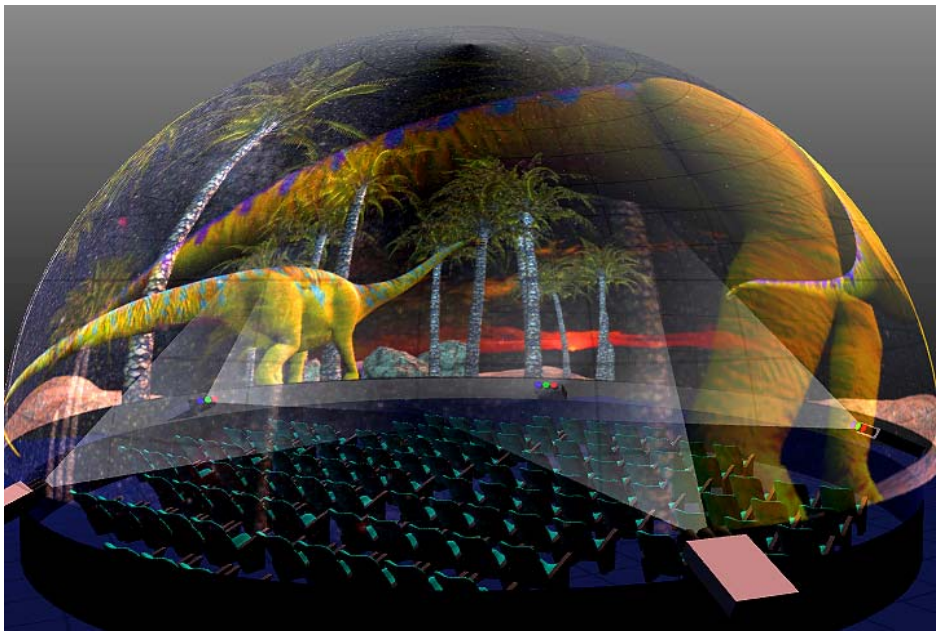
Home Run Pictures

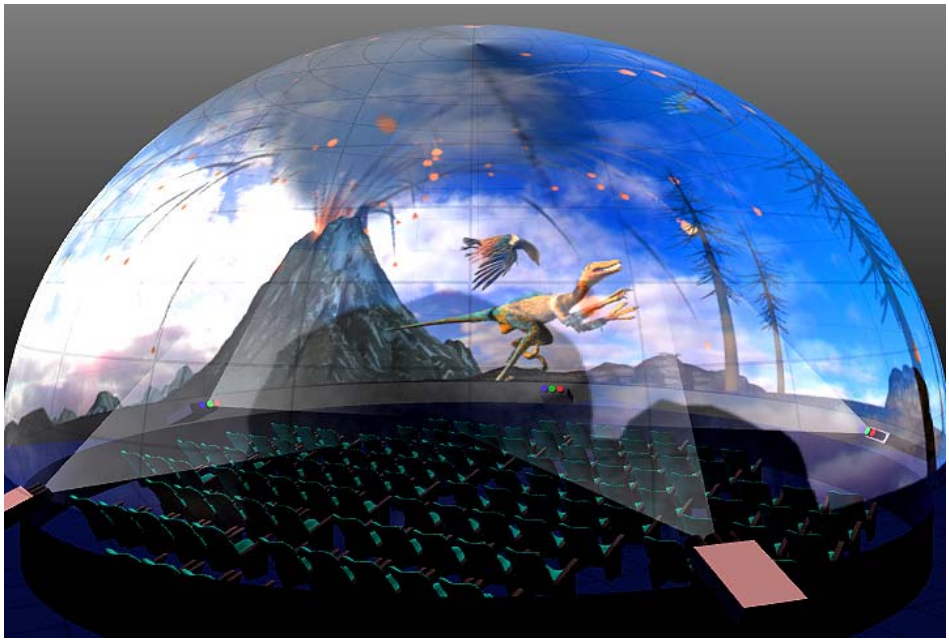
Production Case History #4 - "Dinosaur Prophecy" for NASA Immersive Earth

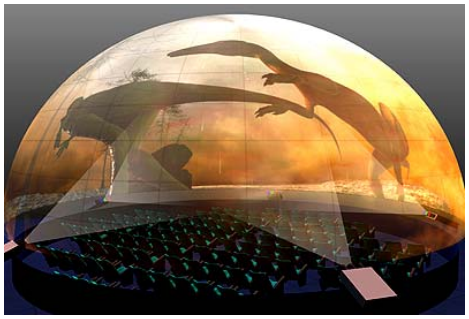


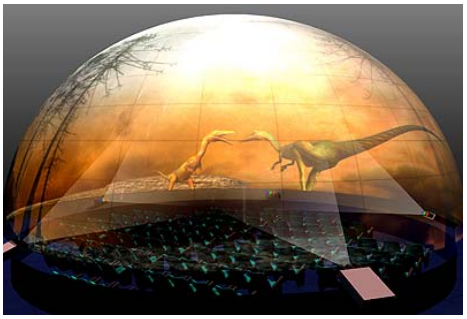
How do you make a show on climate change interesting for school children? You put dinosaurs in it. The story revolves around the idea that climate changes in Earth's history affected the habitats of dinosaurs enough to in some cases cause them to pass into extinction. Four different eras were chosen and a forensic-like investigation was implimented to discover what may have happened to cause the demise of the species found in that time frame.

Each era required our team to travel to a specific dinosaur dig site to gather information to complete the story. Sites in Ghost Ranch, New Mexico... Liaoning, China... Copper Ridge, Utah... and the Badlands, South Dakota were selected. Photography using a special fisheye lens camera setup was used to document the dig sites, resident scientists were interviewed and the stories began to unfold.

In New Mexico, a mass grave of Coelophysis was unearthed, probably the result of a flash flood that caught the animals congregated near a stream as the climate became dryer and water was scarce. In China, feathered dinosaurs were preserved when a volcanic erruption buried the animals, the eruption filling the Earth's atmosphere with a cloud of ash blocking out the sun. Large sauropods left footprints in the soft shoreline of an inland sea that covered most of present day Utah. And the KT asteroid strike event that probably wiped out the last era of the dinosaurs.







Dinosaurs prior to this show, really have not been extensively attempted in the fulldome environment and the challenge was to create animals that compared to what audiences have grown accustomed to seeing in movie theaters. It was quite a challenge our team of animators discovered as four scenes totaling about eight minutes were produced. The fulldome view, which does not have any frame edges, means everything is always in view and the typical scene is one continuous take with no cuts. Large scene files, beyond what is required even for film resolution animation work, were common as more and more detail was added to the fulldome views that were designed.

The project was produced in a one year schedule with six animators working on various aspects of the animations. Modeling of the dinosaurs to current scientific liking, rigging for life-like animation, skin color and texture creation, feather and fur dynamics, particle and smoke simulations, water effects for flooding streams, erupting volcanoes, and asteroid strikes all were created simultaneously during the process, all coming together at the end of the schedule.

Fast creative-decision interaction during the animation, texturing and effects dynamics process was available using Macintosh G5 4-processor workstations equipped with high-end graphics cards. Rendering was accomplished on a Macintosh Xserve render farm with 80Gb of RAM and 3.5 Tb of storage. Maya software was employed as the main CGI toolset.

For further information contact...

Tom Casey - tom@hrpictures.com
Home Run Pictures
100 First Avenue, Suite 450
Pittsburgh, PA 15222
412-291-8200 + http://www.hrpictures.com

Home Run Pictures created the dinosaur animation in the fulldome presentation, "Dinosaur Prophecy " as part of the NASA Immersive Earth Project for licensed distribution to planetariums, museums and science centers worldwide. Partners in the five year project are the Houston Museum of Natural Science, the Carnegie Museum of Natural History and Rice University.