

Digital Dinosaurs

EMS has worked with many customers in numerous industries but when they received a call from McWane Science Center in Birmingham, Alabama they had no idea what was in store for them. James Lamb, Curator of Paleontology, asked if EMS would be interested in scanning a 63 million year old dinosaur egg and other artifacts. James mentioned they have over 700,000 dinosaur bones and fossils in their collection.

The Problem

Any time you go to an exhibit displaying dinosaurs and other fossils you are usually looking at a replica of the original. This copy is made by casting silicon or other rubber-like materials around the original specimen. The original is then removed and plaster is poured into the mold to create a replica. The final step is usually painting and assembling the exhibit.

This process can often damage the original fossil and is very time consuming. In addition, many sets of fossils are missing numerous bones so hand made patterns must be made.

The Solution

In less than 30 minutes, EMS scanned the dinosaur egg completely along with a few other small bones with their Z Corp Z Scanner. Within another 2 hours, they printed out an exact replica on a Z Corp 3D Printer. McWane was so impressed they purchased their own Z Corp 3D Printer and 3D Scanner.

Besides speed and ease of use The Z Scanner is very portable. This feature allows McWane to travel to other museums and exhibits and scan bones missing from their collections. According to James, "it can take over a week to hand make a bone missing from our collection." Now with the Z Scanner and software McWane can scan the missing bones or bones similar to what they need and digitally mirror, scale and edit them as needed.

To do more advanced editing, McWane also purchased SensAble's Technologies Clay Tools product from EMS. Claytools is a virtual clay sculpting tool that can work directly with scan data. It uses an articulating arm with feedback to allow the user to "feel" the digital clay as they sculpt in the computer.

Conclusion

McWane may be working in the stone-age with regards to their subject matter but they are part of the digital revolution when it comes to the tools of the trade they are now using. EMS's expertise in rapid prototyping and 3D scanning has helped McWane get started on over 700,000 fossils. I'm sure they will be busy for a very long time.

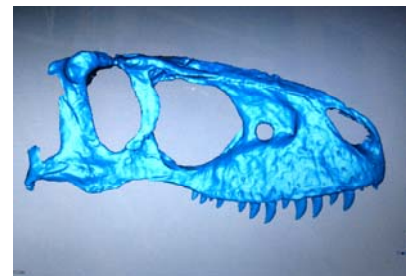
Visit www.ems-usa.com for more information.



63 Million year old Dinosaur egg.



Original bone and finished 3D printed model from scan data



Z Scanner scan data being prepped for the Z Corp 3D Printer