

EMS Helps Honor Veterans

A group of veterans wanted to build a bronze memorial statue to be displayed at an Orlando, FL Veterans Memorial Park. To build the bronze statue they needed to raise money so they built a simulated statue using mannequins and military clothing. They traveled around the state displaying the simulated statue raising the money needed for the final bronze statue.

The Problem

The actual bronze statue was going to be about 3 feet taller than the mock-up so they needed to 3D scan and scale up the CAD model. American Bronze in Sanford, FL contact EMS to perform the 3D scanning for the investment casting process.

The Solution

EMS went on-site and 3D scanned the statue using their Surphaser high resolution long range 3D scanner and their Creaform MetraSCAN hand held 3D scanner. The MetraSCAN was used to scan some of the hard to see and reach areas such as behind the soldiers guns and arms and the soldiers accessories. This included grenades, canteens, backpacks and more. The Surphaser was used to 3D scan the rest of the statues at a very high resolution. High resolution and data quality was key to this project as the model was going to be scaled up and used as master pattern for the casting process.

Once the 3D scanning was finished the data was reviewed with the customer. The customer decided they wanted to make some changes to include the leg and torso position of one soldier and the gun position of the other. For this task EMS used their SensAble Technologies FreeForm model (FFM) product to make these revisions. FFM is a unique virtual clay sculpting tool that allows the user to digitally sculpt the 3D scan data to make the changes required.

Once the 3D scanning was done and the digital changes made the finished CAD model was scaled up to the final size. This model was then sent to the company performing the CNC machining of the master pattern for the investment casting process.

Conclusion

When it comes time to 3D scan sculptures and other complex models EMS has a unique combination of high resolution 3D scanners and advanced software to not only 3D scan but change the data to meet the customer's needs.

To see a more detailed overview of this project click [here](#).



3D Scanning with the Surphaser 3D Scanner



Using a MetraSCAN 3D scanner for the accessories



Final 3D scan model.