Simulation and Training Industry Embraces 3D Scanning and 3D Printing

1888 Press Release

Take a seat in a modern flight simulator, and its easy to lose yourself in the illusion that you are flying a real aircraft. This is true for commercial simulators, as well as military flight simulators. The leaders in this industry are masters at recreating very complex part with the appropriate level of fidelity to ensure the proper training experience without incurring the unnecessary costs of using actual flight hardware.

Traditionally, these types of parts were reverse engineered by hand, or using tools like cardboard templates, tape measures and plumb bobs. Once CAD models were developed from this data, traditional manufacturing techniques were used to fabricate the required parts.

In recent years, big players in the industry have embraced new methods of development for simulators and trainers. Companies like Lockheed-Martin, and Cubic Defense systems have invested in 3D scanning and rapid prototyping systems. 3D scanners allow engineers and technicians to rapidly capture millions of data points to define the complex shapes associated with aircraft parts. This data can then be converted to highly accurate 3D CAD models using specialized software such as Rapidform XOR.

Smaller interior components can then be "printed" in 3D on machines such as Objet's Eden, Connex and Alaris 3D printers. 3D printing is significantly faster and cheaper than CNC machining or injection molding for low volume manufacturing requirements.

These technologies are not limited to large companies however. Smaller organizations can take advantage of these processes by utilizing 3rd party service providers such as NeoMetrix Technologies in Lake Mary, FL. According to Dan Perreault, President of NeoMetrix, "we offer a variety of rapid product development services, such as 3D scanning and 3D printing, so that smaller companies can take advantage of the latest technology available without the requirement for a capital investment". ###
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