

Case study

Meeting the high standards in the automotive industry

HANDYSCAN 3D

A division of Creaform inc.



HOW TO GET ACCURATE DATA FROM A CAR INTERIOR FOR ANALYSIS

The flexibility of a laser camera is essential when scanning a car seat in relation to the car interior. The HandyScan 3D showed great results during a task done on site at a well-known car seat manufacturer's plant. The challenge was to scan the entire seat, door, roof and dash in relation to one another for analysis purposes.

The seat and the car interior were digitized in one single scan. The accuracy of the STL file created by the HandyScan 3D is essential and useful because the standards of the analysis required by the automotive industry are very high. The data acquired was used to do many tests including quality control of the fabric and the foam inserts.

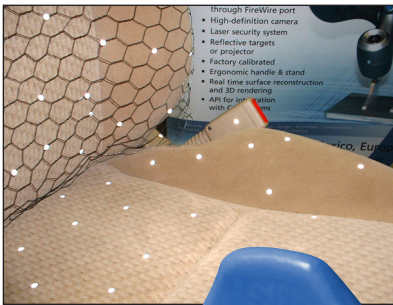
This was possible mainly because the HandyScan 3D does not have big and complex tracking devices. The possibility to scan the car interior, the seat and the dash in relation to each other was not limited by movements in the part or the scanning device. All parts of the car were scanned as they were found at their respective original places inside the car. Nothing needed to be move or taken out of the car.

VX Scan, the software behind the HandyScan 3D is compatible with many software packages and it is fully integrated in Geomagic. The STL file created by the HandyScan 3D can be transferred to any CAD or FEA software package for its analysis. The car seat manufacturer was also able to performer curvatures analysis, H-Point audit as well as ergonomic testing. This particular car seat manufacturer had the need to study the space left in the car around a passenger seating in any possible position.

At different steps in the design process, it is essential to have a scanning unit like the HandyScan 3D, which is capable to either scan a single unit for prototyping or a sample of the seats for quality control inspection during the production process.

To accelerate the process, our scanning team developed a tool to help them scan many seats rapidly, since it is possible to affix targets on a separate grid. This grid can easily be cut and place over the seat. Then, the grid with its targets can be quickly moved from one seat to another. The time to set up the car and seat went down from 30 minutes to just 10 minutes. No other scanning unit can be so easy to operate, and allow for such short times of parts set up.

The HandyScan 3D is without any doubt, perfect for analysis in the development stages, for quality inspection and in production environments.



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