

vc4D Module: Point Clouds

Point Clouds

In plant and factory design the comparison between planning data and the real plant has been very costly if not impossible to do in the past. The PointCloud module -in combination with a laser scanning device- is now able to overlay the CAD geometry with scanned point clouds to compute the deviation and to display the results as an off shade rendering. This source-target scenery can now be analyzed in a very intuitive way. Integrating new parts into an existing building is another task that can easily be solved using the measurement and collision functions of the PointCloud-Module.

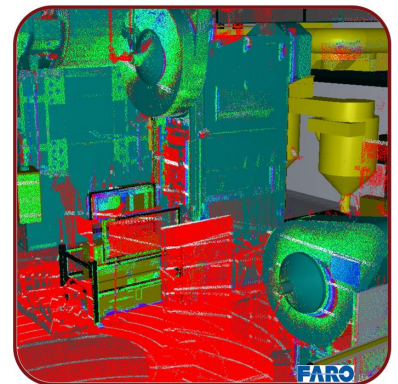
The PointCloud-Module allows for the import of colored point clouds from product-neutral ASCII data. On a standard 32 Bit system up to 60 million points can be rendered in real time.

The integrated "FrameRate Controller" allows for a fluent navigation through large point clouds: During movement the system switches points off to save rendering time.

As soon as the camera stops all points are switched on again.

The advantages of the PointCloud-Module at a glance:

- Computation of large data sets (> 60 million points)
- Computation of coloured points
- Dynamic adaptation of the point clouds detail (LOD)
- Source-target comparison between CAD geometry and scanned data
The result is displayed as a off shade rendering
- Open import interface to easily adapt to 3rd party software packages
- Cluster ready



System requirements:

- Windows™ (2000 / XP / Vista) workstation with 2GB main memory
- 3D graphics card with at least 512MB video memory
- 4DC base installation

Possible configurations:

- Desktop (Mouse, keyboard, SpaceMouse™)
- Powerwall (FlyStick, HeadTracking, aso)
- Multi-Channel installations
- Head Mounted Display
- And many more ...



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