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## **TECHNODIGIT: How to Capture Reality and Mesh any Cloud of Point.**

VILLEURBANNE, France - May 9, 2001 - TECHNODIGIT, a French company localised in the Lyon area, was launched in 1996 and is highly dedicated to 3D object capture. As a leading actor in real 3D reproduction, this company has developed a dedicated process to capture reality and reproduce it in real 3D to the attention of the CAD market or virtual reality applications.

Indeed, TECHNODIGIT is a customer-oriented partner. They handle any complex and non-geometrical 3D shapes, from 10 mm up to several meters sized objects, with the best accuracy required in each application. TECHNODIGIT is a highly specialized team, offering 3D reverse-engineering services. The customers can give a product, a stamp or a cloud of points and they deliver a CAD file, having rebuilt all the surfaces.

To enhance their capabilities, TECHNODIGIT has developed a powerful meshing tool that allows to map any cloud of points coming out from any 3D digitizers (mechanical, laser, structured light systems...), even if there are tenth of millions of non structured points, noisy points, in such a way that only a few number of points is enough to build the 3D model. The number of polygons is independent from the number of points, but just in link with the required tolerance and a cordal feature. The algorithms developed are able to select the right points to mesh without loading all the points in memory and without meshing all the points. Some specific functionalities have been added to mesh according to the curves (triangles oriented in the direction of the curves and the edges). It produces a very accurate and light 3D model whatever the cloud of points is.

This unique software is not proposed as a stand-alone product but it is dedicated to be integrated in other software (DLL modules) such as CAD tools or digitizing equipments.

For example, TECHNODIGIT has captured and built a complete car for the French manufacturer PSA Peugeot Citroen. The model called Berlingo has been rebuilt in 3D with only 120,000 polygons (instead of over a million), thanks to their so specific meshing software. The 3D model (outside and inside surfaces) is going to be used to help end users to choose the version they would like to buy, through a virtual reality system. The entire 3D car model is so light that it can be shown on a simple PC equipped with a 3D card.

In France, TECHNODIGIT is known as the real 3D specialist, always building models from reality and using the most appropriate digitizer according to the needs, involved in industry (CAD, CAM), in animation (triangle polygons) and medical (high accuracy, human models) applications.

"We are so specialized the real 3D services that we can build any object at any accuracy. We are equipped with the best tools and we have developed our own meshing technology. In that way, we can only serve our customers better than they can expect it", says Laurent Mellah, the new marketing manager of the company.

Some references: PSA Peugeot Citroen, Renault, Renault VI/Volvo, Chausson Outillage, Rexam Reboul, Artem, Baccarat, Philips, Decathlon, Calor