

Summary

There is an increasing demand to construct 3D data for CAE (Computer Aided Engineering) from real models. The CAE enables you to do the several numerical simulations like structural analysis by FEM using the 3D data. Using Minolta's VIVID 700, 3D non-contact digitizer, it is easy to process the CAE using many kinds of real models including design mock-up

Work-Flow

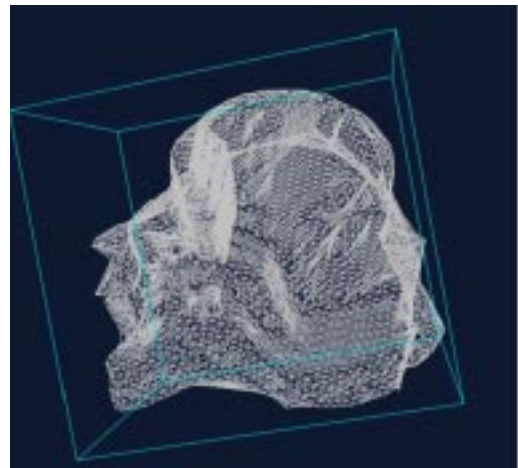
1) Scanning

First, scan a real model or mock up with a VIVID 700 to construct a polygonal mesh image on your computer screen. If the model's surface is not suitable for scanning (e.g., black or dark blue in colors, transparent or mirror-like; it is necessary to cover the surface with white matte paint before scanning.



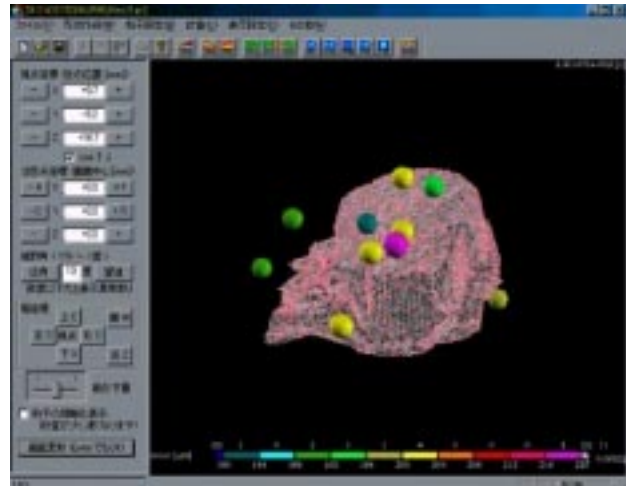
2) Editing

Next, edit the constructed polygon mesh data with the VIVID utility software that is bundled with the VIVID 700, or use Rapid Form 2000 which is ideal for reconstructing 3D data into a FEM format. After editing and merging the polygonal data, save the image to any of the common CAE compatible formats such as, DXF, IGES, and STL.

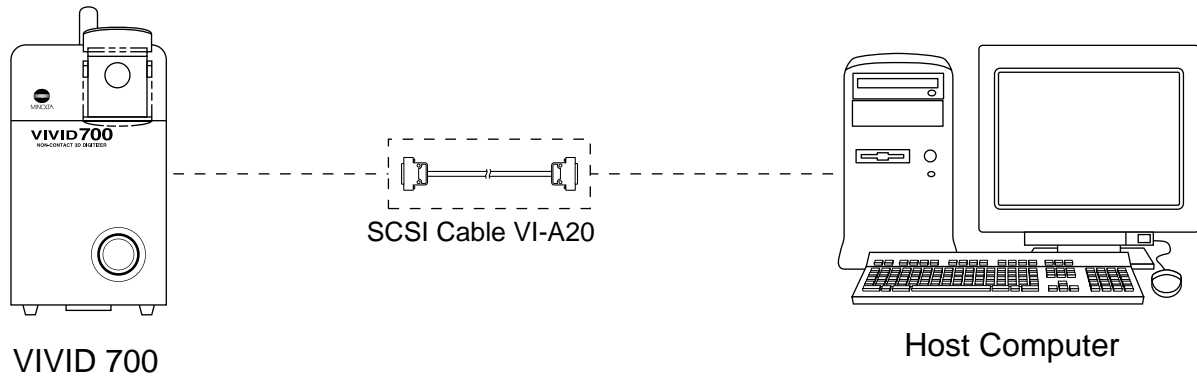


3) Simulation

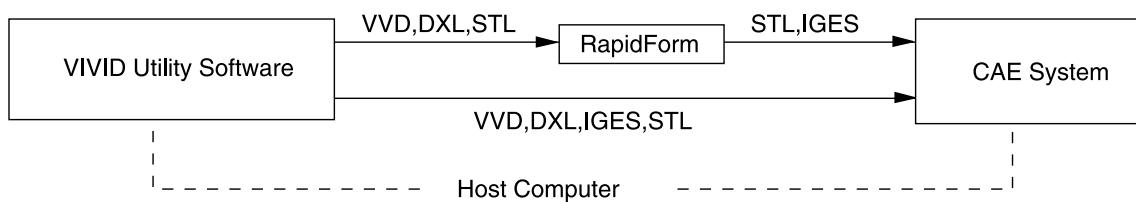
Finally, import the converted data into the CAE system to analyze the structural characteristics of the object. (Fig 5 shows the Particles Analysis System using Minolta's VIVID 700 software).



<System Chart>



<Data-Flow>



Minolta Co.,Ltd. Radiometric Instruments Operations 3-13,2-Chome,Azuchi-Machi, Chuo-Ku, Osaka 541-8556, Japan

Minolta Corporation / ISD 101Williams Drive, Ramsey, New Jersey 07446, USA. Phone:201-529-6060, 1-888-ISD-COLOR FAX:201-529-6070

Minolta Europe GmbH Minoltaring 11, 30855 Langenhagen, Germany

PHONE:0511-74040 FAX:0511-741050

Minolta France S.A. 365-367, Route de Saint-Germain, 78424 Carrières-Sur-Seine, France

PHONE:01-30866161 FAX:01-30866280

Minolta U.K. Ltd. Precedent Drive, Rooksley Park, Milton Keynes, MK13 8HF, England

PHONE:01-908200400 FAX:01-908618662

Minolta Schweiz AG Riedstrasse 6, 8953 Dietikon Switzerland

PHONE:01-7403727 FAX:01-7422350

VIVID 700 WEB SITE: <http://www.minolta.co.jp/japan/rio/vivid/>

VIVID 700 is sold with the name of VI-700 in Europe.