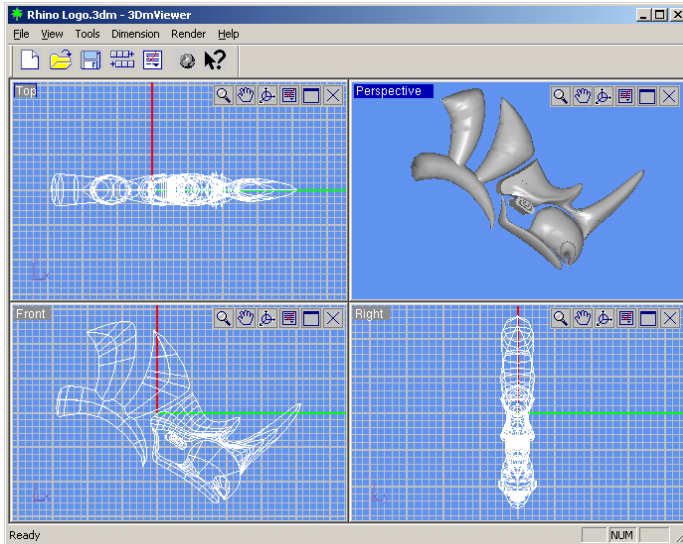


3DmViewer case study

Summary

Application **3DmViewer** enables file viewing in 3Dm format.



Service

- R & D

Industry

- 3D modeling

Project Size

- Team size: 2 software engineers, 1 QA engineer
- Duration: 3 months

Technology

- MS Visual C++
- OpenNURBS Library
- Own designed and coded algorithms for rendering NURBS models
- Own designed and coded UI components
- OpenGL library

Challenge

Final user requirements allow user:

- view NURBS models with various quality and with different CPU usage
- rotate NURBS models in various planes
- move NURBS models
- scale NURBS models
- change model description
- save the model with another name
- customize UI

Solution

In order to ensure the end product meets Client's expectations NRJETIX has developed a detailed software requirements specifications (SRS).

The application consists of such main parts: UI based on OpenGL, OpenNURBS library with interfaces for 3Dm format reading and OpenNURBS wrapper. The proposed architecture allows to decrease the development effort and simplify further application support. The final product received a compact and fast module for NURBS model rendering with a friendly UI.

The application architecture design and UI design were both developed by NRJETIX.

Demo version was provided to the Client at each milestone. Change requests delivered by Client were carefully evaluated and implemented.

Specification

3DmViewer is a Windows application, developed with MS Visual C++. From an engineering point of view it is a standalone Windows application using strictly specialized functions of statically linked OpenNURBS library. 3D model rendering module is based on OpenGL visualization library. The main part of application is the NURBS model rendering algorithm. It was developed by scientists of NRJETIX R&D lab. The application provides a comfortable way of viewing the sophisticated NURBS models on a low performance PC and a capability to vary the model quality rendering.