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Technology:

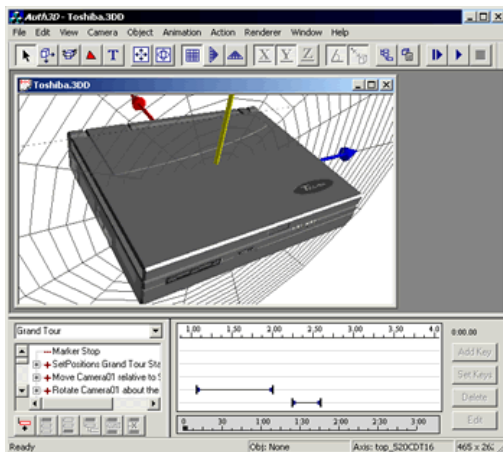
MSVC/ActiveX + Borland C++,
Builder 6

Project size:

7 man-months

Team size:

1 developer, 1 manager



"The new 3D electronic manual feature became part of all Toshiba portable PCs to be sold in Europe."

Martin Green, M.D.



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Toshiba

Interactive 3-D Modelling For Toshiba

The Client

Toshiba is a very large company that needs no introduction. The client in this case was Toshiba's Consumer Electronics (Portable Computing) Division, which wanted to add 3D models of its computers to the electronic manuals of all their portable PCs.

The Challenge

In 1998, Microsoft's Direct3D feature was added to Toshiba's range of portable PCs at the same time as larger, higher-resolution screens were introduced. Toshiba wanted to make the most impressive possible use of these new features. Specifically, Toshiba wanted to create 3D models of its computers that users could explore and interact with, and it also wanted these models to feature in introductory animated tours of the computers and in its existing electronic manuals. It needed an authoring tool for creating and animating 3D models, and a replay engine that was integrated with the Microsoft Help System.

The Solution

Blueberry first carried out a feasibility study on Toshiba's ambitions to replay animations in real time on its particular target machines. The study established the limit on the number of polygons in a 3D model that

allowed it to be animated reasonably quickly and smoothly using Direct3D.

Blueberry also researched existing 3D animation systems, and concluded that they were far too complex for the client's needs, and that they produced models that the target machines wouldn't be powerful enough to replay.

It was necessary for Blueberry to design and implement a new and easy-to-use authoring tool for creating and animating 3D models. It was also necessary to design and implement an efficient replay engine to display the animations it produced.

Microsoft Visual C++ (MSVC) and the Microsoft Foundation Classes (MFCs) proved to be the best development tools in this case, and the replay engine was implemented as an ActiveX control so that it could be more easily integrated into the Microsoft Help System.

After an intensive 6-month development programme, Blueberry delivered all the components of the system. 3D models were created and animated, and the new 3D electronic manual feature became part of all Toshiba portable PCs to be sold in Europe.