SOUTHERN CHINA RAILWAY'S GOFRONT GROUP:
Distributed 3D Rendering To Accelerate Prototyping

Manjrasoft Case Study
Industry: Engineering
Application: 3D Rendering

SOLUTION OVERVIEW

CUSTOMER SCENARIO	GoFront Group, a division of Southern China Railway, is the one-stop-shop for locomotive design in China. Its primary objective is to develop futuristic designs of locomotives to aid the advancement of public transport in China including high speed electric trains, metro cars and other urban transportation vehicles. It used Autodesk Maya in order to render 3D images of the prototypes of the locomotives. By examining the 3D images, engineers identify problems in the original design and make appropriate design improvements.
CHALLENGE	GoFront needed to process more than 2000 frames, each frame with more than five different camera angles to render a single 3D image. A single frame from one camera angle typically took two minutes to render which meant that the complete 3D image could take more than three days to render.
SOLUTION	GoFront implemented Manjrasoft's Aneka technology to accelerate the rendering times without the need to expand its hardware infrastructure. Aneka integrates into the Maya GUI to provide a powerful management and execution environment. The Maya GUI is used to implement Maya rendering through batch mode parameters, generate ANEKA tasks, monitor submitted ANEKA tasks and collect completed rendered images.

BENEFITS	By combining Autodesk Maya with Aneka, GoFront was able to: - Reduce processing time for the above rendering scenario from 3 days to 3 hours, using only 20, mostly idle legacy PCs! - Increase ROI on existing infrastructure by utilizing existing desktop resources GoFront has been able to improve the overall productivity of the product design and hence reduce their time-to-market with minimal investment.
TECHNOLOGY	•Aneka platform from Manjrasoft •Maya from Autodesk