

OPTIMIZATION OF FRONT WING OF Dome Co., Ltd.
FORMULA 3 CAR



Optimal Solutions Software, LLC; OSS Japanese Distributor VINAS Co, Ltd.; Engineous/Japan Software, Inc.; and Software Cradle Co. Ltd.; worked together on a test case to increase the down force and reduce drag on the front wing of the Dome F107 racecar.



The CFD model for the basic shape, containing 1,003,056 elements, was made by Software Cradle's CFD-solver, SC/Tetra.

VINAS defined the morphing activity with the use of Optimal Solutions' **Sculptor** technology. The upper and under curve of the main wing, upper and under curve of the flap, and the angle of the flap were defined as the morphing parameter.

Engineous' iSIGHT optimizer was used to modify the **Sculptor** parameter files.

The project's results were impressive:

The **down force was increased by 19%; the drag reduced by 28%.**

Shigeki Maeda, Product Manager for VINAS, presented the study results at the Engineous/Japan CAO Frontier 2006 event held in Yokohama, Japan.

OBJECT OF OPTIMIZATION

