



Nicolas Davout
*Finite Element
Model Expert*

“Virtual Testing Methodologies”

Sogeti High Tech, Study department

Parc du Millénaire Bât A1, Avenue de l'Escadrille Normandie
Niemen, ZAC du Grand Noble, 31700 BLAGNAC, France

Abstract:

The more an aircraft is heavy, the more it consumes fuel and consequently the less it is attractive for the Airlines. This observation leads the builder to change its design methods and to tighten its safety margins.

But new methods and new materials, such as composites, have to be validated by tests and the cost of these structural tests is very high.

So, in order to ensure the reliability and the success of such tests, the use of numerical simulation is now unavoidable.

HyperMesh has been a strong brick of methodologies developed by Sogeti High Tech to build detailed finite element models dedicated to the non linear computations which are necessary to simulate structural tests. Then these methodologies produce models in very short delays enabling engineers to save time on mesh creation.

Keywords:

- Virtual Testing
- HyperMesh
- Non Linear Computation
- Detailed Model