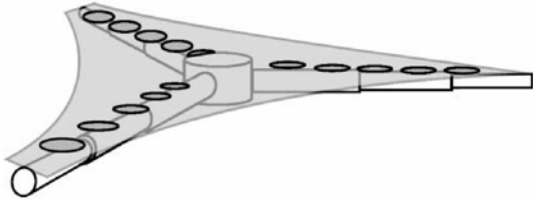
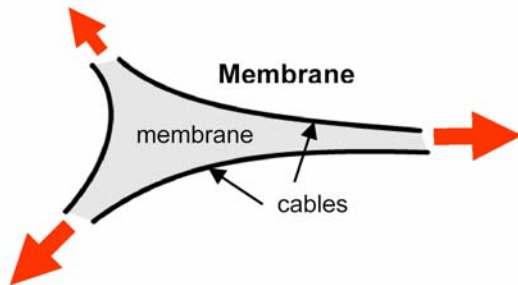


Aerospace Case Study (L'Garde, Inc. - NASA Star Antenna)



NEi Nastran was used by L'Garde, Inc. (www.lgarde.com) to carry out the analysis and modeling of the NASA Langley STAR Antenna configuration. The above left figure shows the original STAR antenna concept. A planar, triangular membrane is stretched via 3 booms. Note the circular RF components positioned accurately on the stretched membrane.

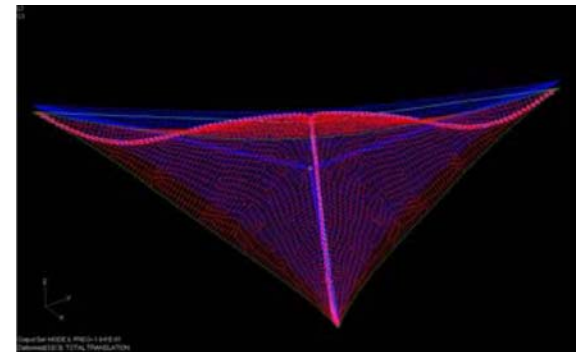
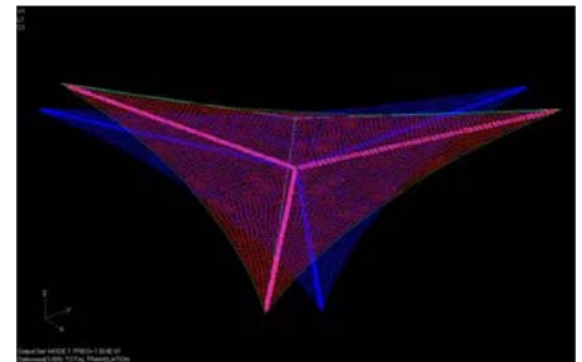
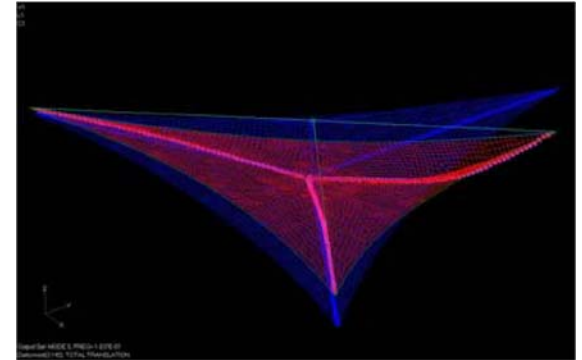
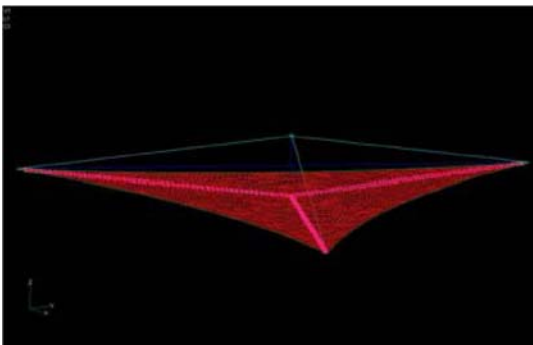


The middle left figure shows the Tensioned Tripod concept (loadings shown with red arrows) used in the finite element analysis performed with NEi Nastran.

NEi Nastran accurately accounted for both the compressive loads on the booms and the tension loading within the membrane.

NEi Nastran was also used to carry out a pre-stress modal analysis. This was necessary to determine what modes and natural frequencies the structures would undergo. The lower left figure shows the finite element model used while the right three figures show the first few modes of vibration.

The finite element modeling and modal analysis made possible with NEi Nastran was instrumental in creating an accurate, efficient, and cost effective solution.



NEi Software, Inc. is aggressively focused on commitment to the customer. Detailed documentation, customized on-site training, and comprehensive technical support ensures that you will see immediate return on your investment.

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