

computing

Muss-Free Ship Assembly

YOU EXPECT A TODDLER TO CHIP or scrape a few blocks while building a tower. But, building a full-scale ship is another story.

components safely without damage, he said. To that end, Cahill's company, which makes three-dimensional product modeling software for the maritime industry, is working with Noran Engineering Inc. of Westmin-

ster, Calif., on software that could help move ship parts damage-free. Noran makes finite element analysis solutions.

The application, code-named ShipLift, would calculate the proper pickup points and keep that information always on file. A 3-D model of the structure would be created in ShipConstructor's design software. The FEA package, NEi NASTRAN, would analyze the model for stresses and strains on pieces, and identify the best pickup points for safe free-lifting and handling, said Dave Weinberg, Noran's CEO.

Lifting calculations and operator-handling instructions would be included on the models of the ship parts. Changes to the model would au-

tomatically update the FEA calculations, Weinberg said.

The U.S. Navy is funding the joint project through its Small Business Innovative Research program.

Shipbuilders see their construction costs rise sharply and their production time drop when they have to repair ship components that get damaged while being moved about the yard, often by a giant crane, said Patrick Cahill, president and chief executive officer at ShipConstructor Software USA Inc. of Victoria, British Columbia.

The way components are lifted and handled at shipyards often comes about through trial and error. Long-time employees know how best to move fragile components and that knowledge is lost when they retire or move to a different job, Cahill said.

Shipyards need a way to lift ship



Ship parts need to be loaded precisely when they're being moved by crane. Software under development would make sure the parts are grabbed just right, so that they aren't damaged.

This section was written by
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