

FROM DAVE'S DESK

We have three articles in this short issue of our Digest: one from Dawn Smyers about our acquisition of the smart product model "ShipConstructor", one about Data Security by Tom Riley as a guest writer from Alpha Business Services of Baltimore, Maryland and one by Dan Bagnell on Navatek's Blended Lifting-Body Technology being used to make significant improvements in vessel seakeeping and performance.

For many years, we have been using 3-D AutoCAD for all of our design projects. While this capability will continue to be important to us and our clients, we are training to be proficient in the use of the AutoCAD-based, smart product model ShipConstructor to more efficiently support a number of vessel detail design projects in which we expect to be engaged next year.

Tom Riley's article needs to be read by everyone concerned with protecting intellectual and proprietary data. His insights into improved data protection are invaluable.

Dan Bagnell's article was prompted by the very impressive at-sea demonstration we received from Navatek in Hawaii last year. This included participation in side-by-side comparisons of two craft with lifting bodies, with and without ride control, and one high-speed offshore planing craft from the UK operating in rough seas off Waikiki Beach. The ride quality of the craft with lifting bodies was remarkably good. We are now pleased to be providing design support to the contract design package for Navatek's latest development, a 160-ft Blended Lifting Body (BLB) Technology Demonstrator that Dan briefly describes in his article.

SHIPCONSTRUCTOR SMART PRODUCT MODEL

By Dawn Smyers, Design Engineer

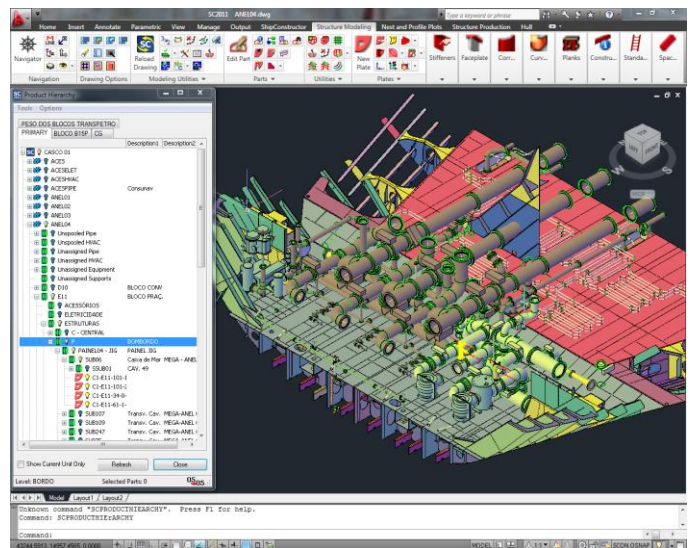
ShipConstructor is a "set of software tools for planning the production of ships and offshore structures; designing and modeling hull, structure, piping, HVAC, penetrations, and equipment; and generating production documentation to enable efficient fabrication." This AutoCAD-based shipbuilding software tool has recently been acquired by the Band Lavis Division of CDI Marine (CDIM-BLD).

ShipConstructor software provides 3D detail design and modeling for production engineering of marine structures. It captures all information relevant to the 3D design, manufacturing, maintenance, repair, and refit of marine projects through its relational database. This is similar to parametric modeling in which geometric dependencies are built-in, so that editing one shape will cause other shapes to update to the new size/location. This will vastly facilitate efficient design and fabrication of the project, delivering vessels in shorter periods of time and at lower cost. Because a single database is utilized for everything, it ensures that the design and manufacturing team is always working with the most current information and allows shipyards to add their own reporting using Excel or another program in the Microsoft Office Suite.

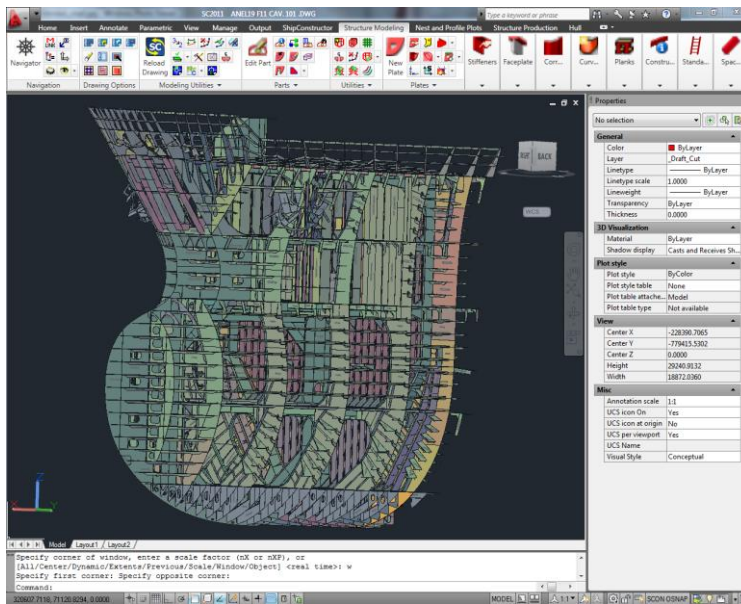
ShipConstructor has a range of modules that CDIM-BLD has acquired, which cover:

- Build strategy planning
- 3D assembly drawing
- Plate and stiffener nesting
- NC code output, for automated plate cutting
- Stock and supplier management
- Piping and outfitting
- HVAC

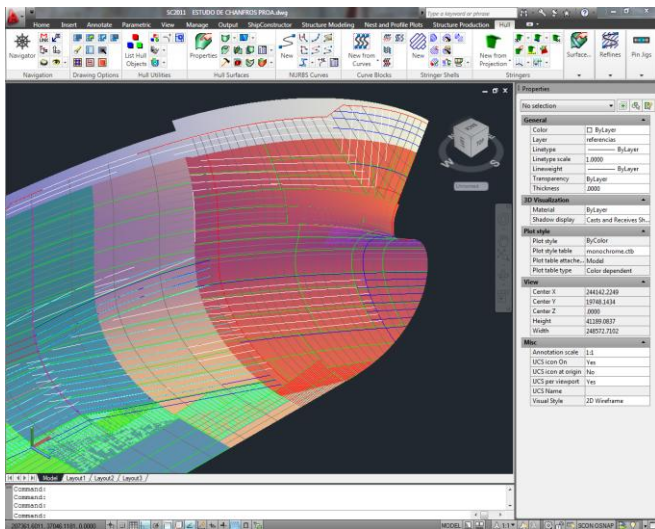
The following five figures are screenshots of the ShipConstructor software.



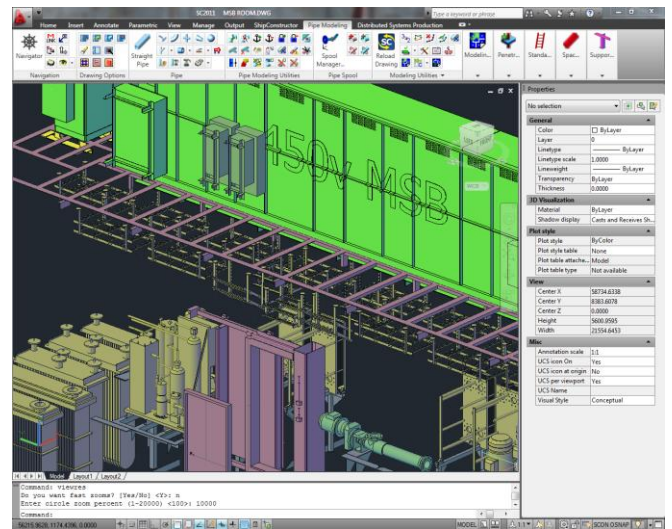
Product Hierarchy Example



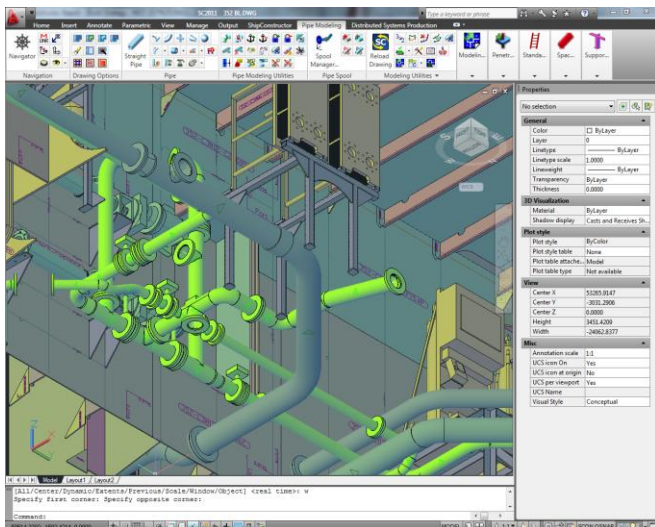
Structure Example



Hull Example



Equipment Example



Piping Example

CDIM-BLD has also begun to examine the process of converting SolidWorks models to ShipConstructor.

Recently, I attended the Administrators course in Mobile, Alabama. The Administrator module allows one to set up and manage projects, including copying and backing up projects, creating user accounts, managing licenses, monitoring project activity, database management, managing project settings and libraries, and splitting/merging projects. CDIM-BLD personnel plan to attend more module courses in the future.

NAVATEK 160-FT BLENDED LIFTING-BODY TECHNOLOGY

By Dan Bagnell, Director of Naval Architecture

The Band Lavis Division of CDI Marine has been hired by Navatek to provide engineering services in support of the development of the Contract Design package for a 160-foot Blended Lifting Body (BLB) technology demonstrator. Navatek has been developing the Lifting Body technology for a number of years. The basic concept incorporates a foil that not only provides dynamic lift, but also buoyant lift. "Blending" the foil into the hull of the vessel eliminates the navigational draft issue that previous hydrofoil concepts faced.



65-Foot BLB Prototype

The advantage of the BLB concept is superior seakeeping characteristics and higher operational speeds in a seaway. The combination of the dynamic and buoyant lift can support 30% or more of the vessel weight. Navatek has conducted extensive research on this concept utilizing both CFD and the construction and testing of prototype craft

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DATA SECURITY – WHAT'S YOUR EXPOSURE?

By Tom Riley, Guest Writer, Alpha Business Services

Security vendor McAfee recently published a report about a hacking group that penetrated over 70 companies and organizations. National secrets were stolen along with business plans and other sensitive data. What struck me was that this had been ongoing for at least 5 years. The report concludes that the only entities safe from attack are those who don't have anything interesting or valuable worth stealing. If this doesn't worry you, it should.

Ironically my largest client recently failed their Department of Defense Security Audit, putting nearly 140 million dollars in contracts at risk. We were the vendor most involved in their security structure and were the recipient of a number of heated calls.

Thankfully the problem was resolved fairly quickly with the fault being in the audit process, not the client security. In fact, if the client would have passed in the first place, it would have only been possible if there was a potential hole in their security.

I don't believe you can ever be 100% protected despite having the best procedures in place. The George Orwell "1984" quote, "If you want to keep a secret, you must also hide it from yourself", makes perfect sense.

We have found that many organizations overlook some of the core practices to lessen their risk. These are basic, but some also require a change in behavior, which at times seems impossible.

If you have to pass sensitive information to someone else, don't text if you can email, don't email if you can call them, don't call them if you can do it face to face. This comes from Jeff Moss the founder of the famous Black Hat and DefCon group of hackers.

There are virtually no good reasons to store any sensitive information on a portable device, including your laptop. This goes for personal information as well.

Passwords should be high strength and changed frequently. Never use the same password for your personal and business logins. I know it's an imposition, but well worth the aggravation.

Keep the number of open windows in your browser to a minimum. I use multiple browsers which lowers the risk of malicious script in one window logging your keystrokes in another.

Set your browsers to not only clear cache and delete history on exit, but to also delete cookies. I know it's going to affect automatic logins, but just think what would happen if your laptop or Smartphone is lost.

The popularity of "smart" devices has prompted many users to demand "Anytime, Anywhere, Any device access to corporate networks. First, is it absolutely necessary, second, can you effectively secure these devices?

Intellectual property, business plans and contract negotiation information are prime targets for industrial espionage. Make sure they are protected. Never forget that the weakest link in data security is the user. Most hacks and penetrations start with "Social" engineering, an unwitting disclosure of a password and login.

I could go on, but this should be enough to make you lose a bit of sleep.

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THE DIGEST

of The Band Lavis Division of CDI Marine

NAVATEK 160-FT BLENDED LIFTING-BODY TECHNOLOGY, continued from page 3

that ranged in size from a 60-foot, 40-ton craft to a 165-foot, 320-ton craft. In 2010, Dave Lavis and Dan Bagnell visited Navatek and had the opportunity to experience the superior performance of a number of these prototypes.

Currently, Navatek has funding to develop a Contract Design package for a 160-foot BLB variant. This design is being done to ABS High Speed Naval Craft Rules and will be reviewed by ABS. We are tasked with assisting with the development of structural loads and the structural design as well as developing the design and drawings for the SWBS Groups 400 Electronics and Communications, 500 Auxiliary Systems, and 600 Outfit and Furnishings.



65-Foot BLB



160-Foot BLB Demonstrator

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our newsletter can be viewed at this website.**