

## SHIPCONSTRUCTOR THE STANDARD FOR THE US NAVAL MARKET

LCS 3 USS Fort Worth  
Shipbuilder: Marinette Marine  
Production Engineering: Gibbs & Cox

Image Courtesy of United States Navy

### IN THIS ISSUE:

PAGE 2 ShipConstructor the Standard for the US Naval Market

PAGE 4 The Largest US Yacht Engineered With ShipConstructor

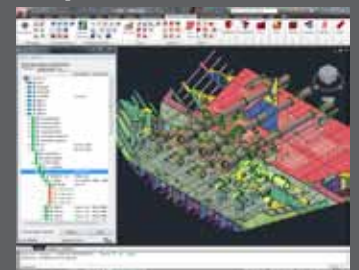
PAGE 4 ShipConstructor 2011

PAGE 6 Brazilian Expansion

PAGE 7 ShipConstructor Quality Program

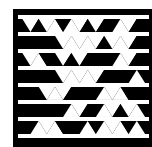
PAGE 8 New ShipConstructor Subscription Advantage Pack

### ShipConstructor 2011



Page 4

To download a PDF of this document, scan the barcode with your mobile device



or visit  
[www.shipconstructor.com](http://www.shipconstructor.com)

# SHIPCONSTRUCTOR

THE STANDARD FOR THE  
US NAVAL MARKET

Pictured: DDG 107.  
DDG 113 - 115 are being  
modeled in ShipConstructor.

Shipbuilders for the world's most advanced naval fleet continue to utilize ShipConstructor on their projects at an ever increasing level, demonstrating that ShipConstructor's intuitive AutoCAD based software is adept at scaling up to accommodate the increasingly demanding requirements of US Naval shipbuilders.

"Since our initial involvement with US Naval projects eight years ago, our market share in the United States has grown to significantly surpass our competitors," notes ShipConstructor Marketing Manager Michael Viala. "As workers have transferred from yard to yard, they have insisted on using our shipbuilding specific AutoCAD based application. Positive word-of-mouth has been the best form of advertising for our product."

ShipConstructor's open architecture and AutoCAD foundation have made it easy for the program to work in conjunction with a wide variety of other applications. This has aided supply chain integration and eased the adoption of the software into several organizations since virtually any format can be imported or exported.

Another reason for the widespread adoption of the software has been the close collaboration between the company and the industry. ShipConstructor staff members have worked closely with US Naval shipbuilders on multiple NSRP projects to develop features and functions that reflect global best practices reducing costs in both the design shop as well as in the shipyard. These projects have had a significant measurable impact on competitiveness as documented by studies performed by First Marine International.

Huntington Ingalls Industries, Marinette Marine, Austal USA, VT Halter, and Bollinger Shipyards are a few of the many customers that are using ShipConstructor software. ShipConstructor usage is so prevalent for naval shipbuilding that the majority of the US Navy's future fleet is being modeled with the software.

“...they have insisted on using our shipbuilding specific AutoCAD based application.”



Image courtesy of United States Navy



Littoral Combat Ships: In December 2010 Congress approved the purchase of ten each of both Austal's and Lockheed Martin's competing designs for the Littoral Combat Ship (LCS) program. As with previously built Littoral Combat Ships, future vessels in both the Independence and Freedom classes are being 3D modeled and constructed by companies using ShipConstructor.

Image courtesy of United States Navy

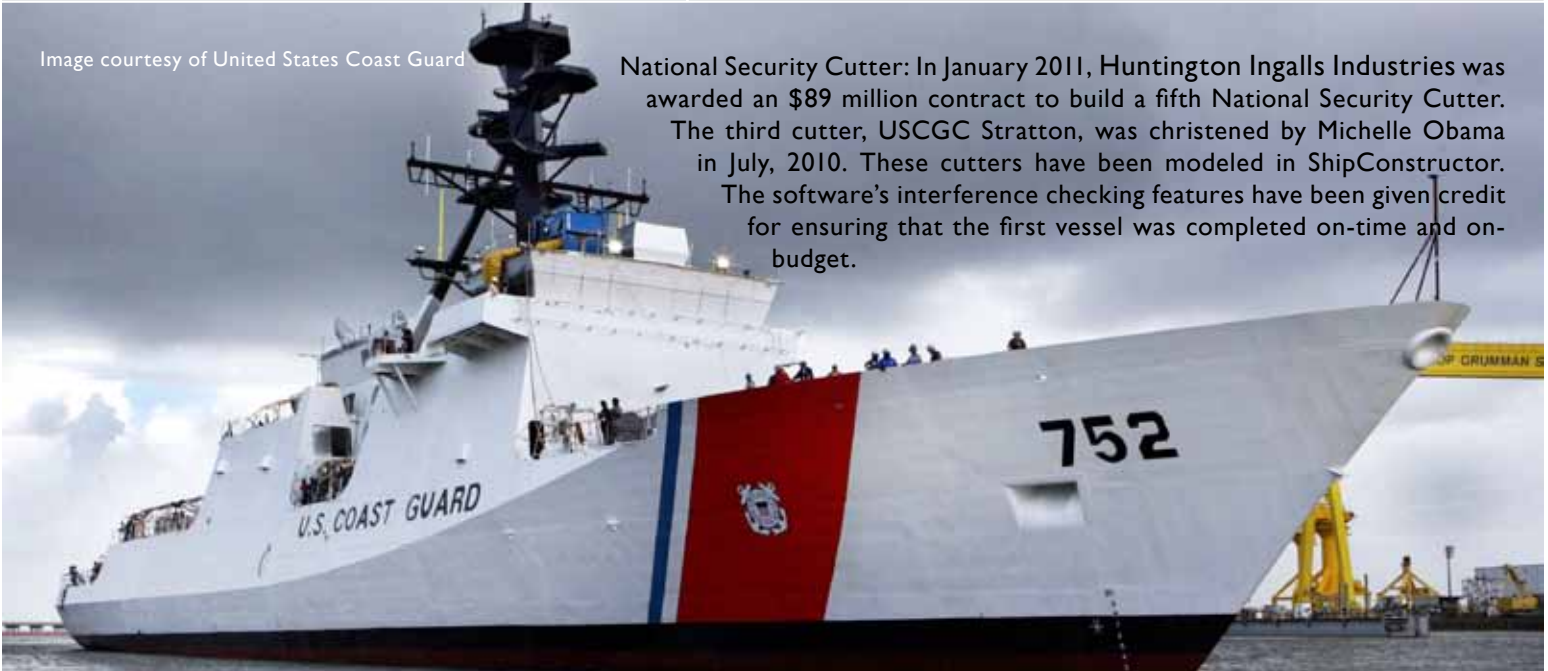


Image courtesy of United States Coast Guard

National Security Cutter: In January 2011, Huntington Ingalls Industries was awarded an \$89 million contract to build a fifth National Security Cutter. The third cutter, USCGC Stratton, was christened by Michelle Obama in July, 2010. These cutters have been modeled in ShipConstructor. The software's interference checking features have been given credit for ensuring that the first vessel was completed on-time and on-budget.



T-AGM 25: The 12,575 ton Missile Ranging Ship, USNS Howard O. Lorenzen was launched by ShipConstructor customer VT Halter in June 2010. This complex vessel will gather data on missile launches to test missile accuracy and to monitor strategic arms treaties.

Image courtesy of VT Halter Marine Inc.



## LARGEST US YACHT ENGINEERED WITH SHIPCONSTRUCTOR

ShipConstructor CAD/CAM software was used for the production engineering and detail design of the megayacht, Cakewalk.

At 281 feet (85.6m) and 2,950 tons, she is the largest yacht built in America since the 1930s, and possibly the biggest ever built in the country when measured by volume.

Cakewalk, built by Derecktor Shipyards, was launched in 2010 in Bridgeport, Connecticut.

The marine design consultancy firm BMT Nigel Gee of Southampton, UK utilized ShipConstructor's AutoCAD based shipbuilding CAD/CAM software for the detail design of the hull as well as for the distributed systems within the main steel structure, e.g. the engine room.

Gibbs & Cox, a Virginia-based marine engineering firm, also utilized ShipConstructor software for modeling the systems within the yacht's superstructure.

"Cakewalk is a design and engineering triumph," noted Denis Morais, Product Development Manager for ShipConstructor Software Inc. "We're proud of the fact that once again, our world-class software is associated with the construction of a world-class vessel."

---

## SHIPCONSTRUCTOR 2011

The latest release of ShipConstructor CAD/CAM software offers performance enhancements and new tools to speed up the ship design and construction process.

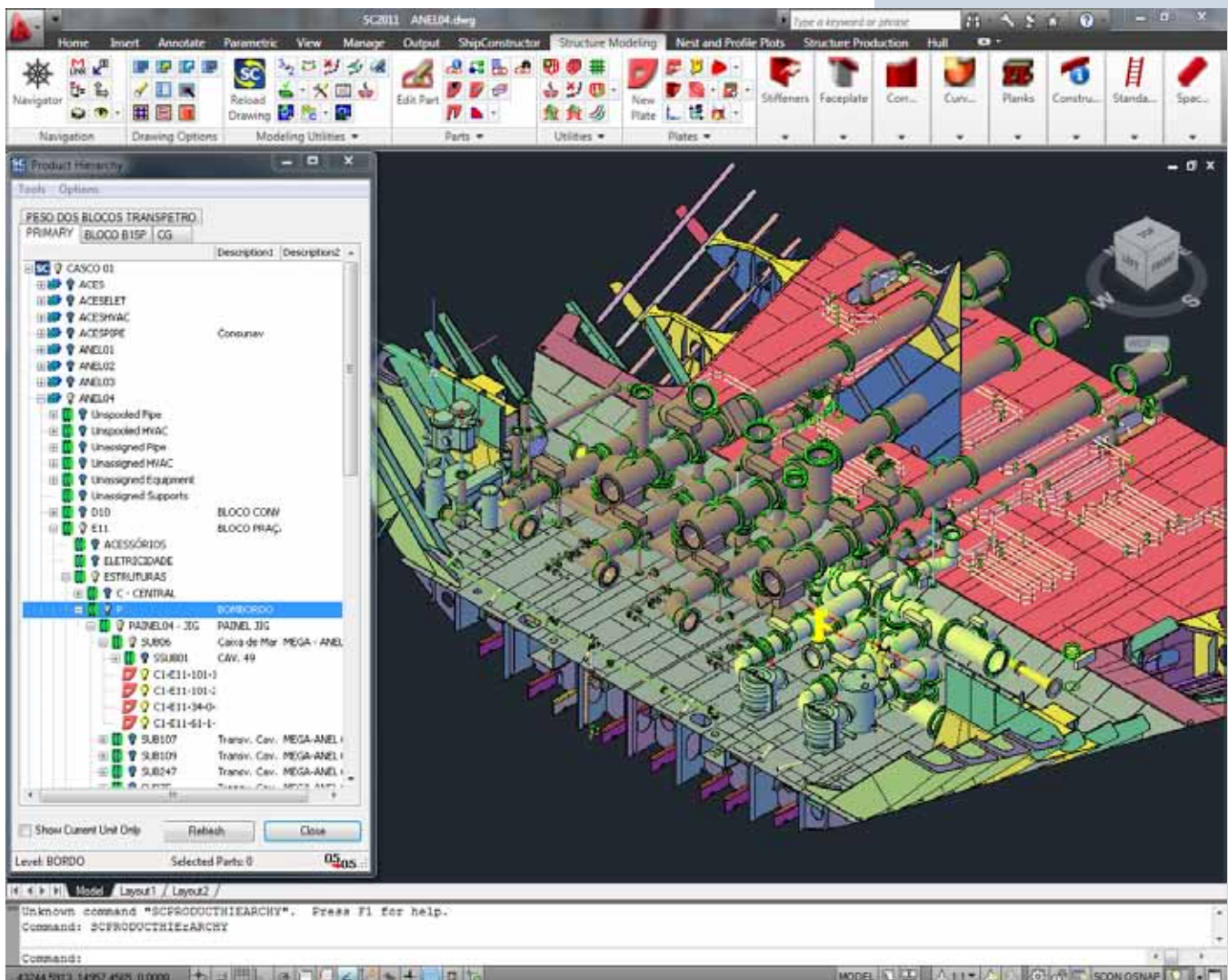
ShipConstructor Software Inc. is promoting the ShipConstructor 2011 release of its AutoCAD based program as a continuation of its strategy of being the most intuitive and efficient of all the major shipbuilding-specific CAD/CAM applications.

"Shipbuilders have told us that slow, inefficient, complicated programs are unacceptable," said ShipConstructor Software Inc. CEO Darren Larkins. "In both mature and emerging markets, shipbuilders need to quickly find and train staff. They are also under increased pressure to increase efficiencies so we have deliberately constructed software that we believe is the easiest to learn and use."

## ShipConstructor 2011 Features:

- Increased Speed – Less time spent waiting. Assembly and arrangement drawing creation and updating performance has been improved by up to 50%.
- Batch Updating of Production Drawings – Increased user efficiency by allowing updating of multiple production drawings in a single operation.
- Project Equipment List – Allows management and reconciliation of the project master equipment list to the 3D model in ShipConstructor.
- Improved Change Management – ShipConstructor's Associative DWG technology has been leveraged to improve change management. More undo options are available.
- Updatable Twisted Stiffeners – Shrinks the design spiral between Hull and Structure. Allows updating of twisted stiffeners in structure drawings with changes from hull drawings without having to re-export the part.
- Reports by Model Drawing – Enables easier work-in-progress reports by generating reports for content within individual model drawings.
- Enhanced support for Multiple Product Hierarchies --Allows multiple build or product breakdown strategies to be defined and to drive production from a single project.
- Enhanced Revisions Management-- More revision types and improved user interface for revision search and review. Revisions can also be exported for review in a web browser or Excel.
- Project Split & Merge Performance Improvements-- Partition split, merge, or refresh files into manageable chunks for simpler transmission.
- Unique identifier in AutoCAD OPM and COM interfaces—Part GUID information is more easily accessible for simpler integration with other software.
- Negative X Coordinate in Profile Endcut Definitions-- Enhanced parametric endcuts that support negative X origin coordinates.

For more details on ShipConstructor 2011, see: [www.shipconstructor.com/SC2011/](http://www.shipconstructor.com/SC2011/)





## BRAZILIAN EXPANSION

Brazil's largest shipyard, Estaleiro Atlântico Sul (EAS), has started project-detailing on five Aframax tankers with the help of ShipConstructor CAD/CAM Software.

In May 2010, EAS launched the Suezmax tanker, João Cândido, the first vessel in the massive Promef shipbuilding expansion program for Brazil's state-sponsored oil company, Petrobras.

Following its success with ShipConstructor on the first vessel, EAS is now using ShipConstructor to design and detail three separate Promef-related projects simultaneously: the 5 Aframax Tankers, 10 Suezmax tankers, plus a P-55 offshore semi-submersible hull.

A variety of other Brazilian shipyards and engineering offices have also been utilizing ShipConstructor to address the rapidly expanding demand for vessels to service Brazil's offshore industry. Consunav, Kromav Engenharia, Estaleiro Inace and ETP Engenharia are all part of the growing Brazilian ShipConstructor client-base.

"ShipConstructor is currently the most widely used CAD/CAM tool in Brazilian shipbuilding," said Bruno França, of SINCRONIA, ShipConstructor's representative in the country.

To address the growing demand for workers trained to use the ShipConstructor AutoCAD based shipbuilding CAD/CAM application, França noted that EAS donated 40 ShipConstructor licenses to the technical college IFPE (Instituto Federal de Educação, Ciência e Tecnologia de Pernambuco) in order to help train new workers.

"Promef is one of the most significant shipbuilding programs in the world right now," said França. "Because ShipConstructor is far easier to learn than competing software, Brazilian companies have realized ShipConstructor is the ideal marine construction application to use in order to capitalize on the current opportunities in this country."

**For more information:**

View a case study of EAS and ShipConstructor in Brazil at [www.shipconstructor.com/EAS/](http://www.shipconstructor.com/EAS/)



# SHIPCONSTRUCTOR QUALITY PROGRAM

ShipConstructor Software Inc. takes several steps to ensure the high quality of our software. Developing new features is always important but continuing to enhance stability, performance and reliability is equally essential.

Denis Morais, our Development Manager consults widely with industry experts to ensure the company is following best practices.

“We’ve incorporated several Agile Development techniques to enhance quality,” said Morais. “For instance, we break down development into smaller chunks with more milestones. This allows us to more easily identify and correct problems that can result from changes or additions.”

ShipConstructor has created a suite of regression tests that run daily on models customers have given us. These tests also ensure developers have quick notification if stability is compromised when they change the program’s code.

Having the developers utilize the software to model hypothetical projects is also an important part of ShipConstructor’s testing process. Developers find bugs and maintain knowledge of the program’s functions by using the software in real world scenarios.

ShipConstructor has also included the trend-setting marine production design company, Genoa Design International Ltd. in its Quality Assurance Partner program. Genoa tests the software in a production environment and provides valuable feedback before new versions are released to the general public. Genoa has a corporate culture of excellence and their involvement adds a significant contribution to ShipConstructor’s commitment to setting industry standards for quality and stability.



Staten Island Ferry  
Production Engineering: Genoa Design International Ltd.

Image courtesy of David Berkowitz

## ShipConstructor Seven-Stage Quality Program

### Quality Assurance during Design

- The QA team is involved in the initial design of new features. Test cases are created at the beginning of the development process.

### Development Quality Control

- Regression testing by multiple developers is performed during development.
- Tests are performed on customer projects to ensure we are using realistic data.

### Development Code Review

- All code is reviewed by peer developers to ensure adherence to company standards.

### Automated Regression Testing

- Automatic nightly tests that detect newly introduced bugs in the software’s core functionality.

### Quality Assurance Testing

- Employs modern testing techniques including performance testing, session based testing and user based testing.

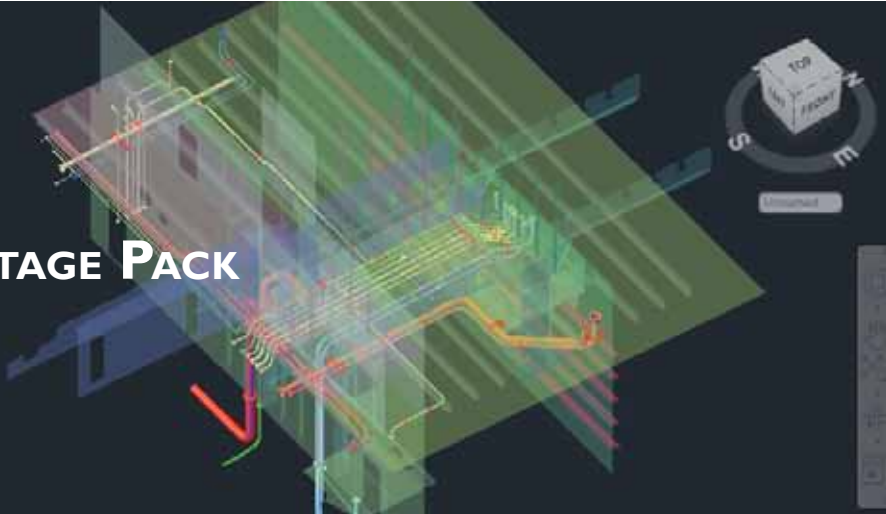
### Manual Regression Testing

- This ensures no new features have negatively affected existing features.

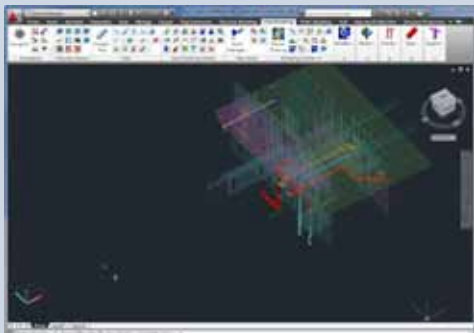
### Quality Assurance Partner Testing (Genoa)

- An external company tests the software in a real world production environment before release.

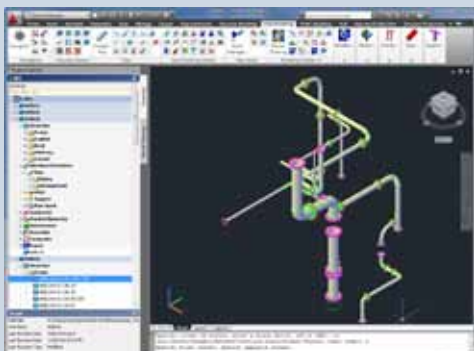
# NEW SHIPCONSTRUCTOR SUBSCRIPTION ADVANTAGE PACK



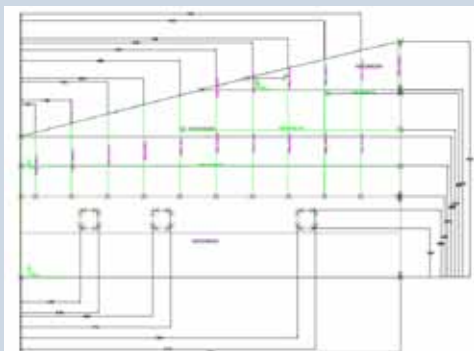
ShipConstructor Software Inc. (SSI) has launched a program similar to the Autodesk Subscription Advantage Pack. It allows customers to improve productivity and competitiveness by gaining early access to new features and functionality. It also gives access to productivity enhancing tools that may never become part of the core software package.



Part View



Project Explorer



Automatic Dimensioning

The Advantage Pack is a new enhancement to the ShipConstructor annual Subscription program for upgrades, maintenance and support. A Subscription provides customers with technical assistance as well as downloadable upgrades, hot fixes and patches to ensure that subscribers always have access to the latest version of the software.

The Advantage Pack is a special new benefit that is only available to current subscribers. It allows them to utilize new features that have not been released to the general public. This enables subscribers to help influence the development of ShipConstructor and stay on the leading edge of the industry.

In the coming year, ShipConstructor plans to offer several features as part of the Subscription Advantage Pack including:

- **Part View** - This feature will allow any ShipConstructor part or portion of the model to be viewed in any type of drawing. It will let a user view only the information required (and no more), when performing a task. This will reduce rework caused by collisions created in the 3D model. In contrast to using the current ShipConstructor M-Link technology, this can also greatly increase performance. Additionally it could be used to bring additional information into ShipConstructor production output for reference.
- **Project Explorer** - Project Explorer is a new feature to allow lightweight navigation of a ShipConstructor project. Project Explorer will be a new palette allowing users to quickly view, open, and switch between project drawings, allowing designers to spend less time looking for drawings and more time on higher value activities.
- **Automatic dimensioning** - This is the first iteration of a new feature intended to speed up dimension detailing in production drawings by leveraging AutoCAD's Quick Dimensioning function within the ShipConstructor environment. This technology preview will allow SSI to further develop this capability.