

# Shipbuilder Uses Brava!<sup>®</sup> to Help Speed Design and Construction Cycles

## Vertical Industry

- Transportation Equipment Manufacturing

## Functional Areas

- Engineering
- Construction

## Company Facts

- Shipbuilder designs, builds and repairs vessels for military and commercial customers

## Challenge

- Streamline review process
- Give users a way to easily share complex drawings

## Brava Solution

- Users can view and collaborate on a variety of file formats
- Markups from multiple sources easily consolidated into one document
- Saves time with quick, accurate rendering
- Eliminates the need for multiple software applications

Ships—the largest self-sufficient and mobile structures built—are complex structures. The business of designing and constructing commercial and naval vessels requires significant resources and expertise.

## Multiple Contributors, Multiple File Formats

During ship design, a team of nautical architects, marine engineers and designers create detailed drawings and specifications. Because multiple contributors are involved, the team often works with a variety of file formats that may include plot files, C4 images and CAD formats such as AutoCAD DWG and DWF, and MicroStation DGN; however, some reviewers may not have the native design software for all formats installed on their computers.

One shipbuilder deployed Brava!<sup>®</sup> for Open Text<sup>®</sup> ECM to help its design team improve collaboration and speed review cycles. Developed by Informative Graphics Corp. (IGC), Brava enables users to electronically view, annotate and collaborate on virtually any file format, including all of the shipbuilder's complex design files.

Brava works within the shipbuilder's Open Text ECM environment so files can easily be uploaded into the repository for the team to review, make comments and markups and then republish back into the Open Text repository as PDF, TIFF, JPEG or secure CSF rendition. Brava lets reviewers easily add and share markups and annotations with the rest of the team without needing additional, expensive desktop applications. Users can also consolidate markups from multiple reviewers into a single annotation file to make incorporating changes into the CAD design easier.

## Brava Reduces the Need for Native Software

Once plans are final they are sent to the shipyard so that pipefitters, welders, tool and die makers and other skilled tradesmen can begin constructing the ship. Using Brava, shipyard supervisors and managers easily share the design files with the rest of the yard. According to one of the company's analysts, "The vast majority of our employees—management and those in the yard—don't have AutoCAD so Brava is an easy, cost-efficient way to give them access to complex design files." He elaborated, noting, "Prior to Brava, we had just one workstation installed with AutoCAD or had just one user as the focal point for viewing files." Brava gives all users with proper access privileges the ability to view, annotate and print high-resolution design files.

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*(Cont.)*

### **Brava's Quick Rendering and Batch Print Feature Saves Time**

Before deploying Brava, employees had to wait up to a full minute for a drawing to be rendered. With Brava, files are rendered quickly and can be cached so future users have nearly instant views. "With upwards of 10,000 drawings uploaded into Open Text ECM each week, a lot of time is saved with Brava. Because files open faster, Brava alleviates a lot of frustration," said the analyst.

Another time saver—Brava's batch print module—makes it "possible for our team to batch print several hundreds of drawings in a folder. This decreases the time it used to take to spool up files for printing," said the analyst. Users enjoy a full range of print options and settings including the ability to print the current view, print a range of pages, print pages to scale, adjust CAD line weights and more.

In addition to Brava's technology solutions, the shipbuilder is also pleased with IGC's responsiveness, "When we go to Informative Graphics with a question or issue, the technical support teams efficiently handle our concerns, are respectful of our time, and always provide a rapid response," said the analyst.

### **Summary**

Giving users the ability to view, annotate and print virtually any file type, Brava offers the shipbuilder an efficient way to streamline a complex design and construction workflow, even one involving many participants who work with huge amounts of data and multiple file formats.