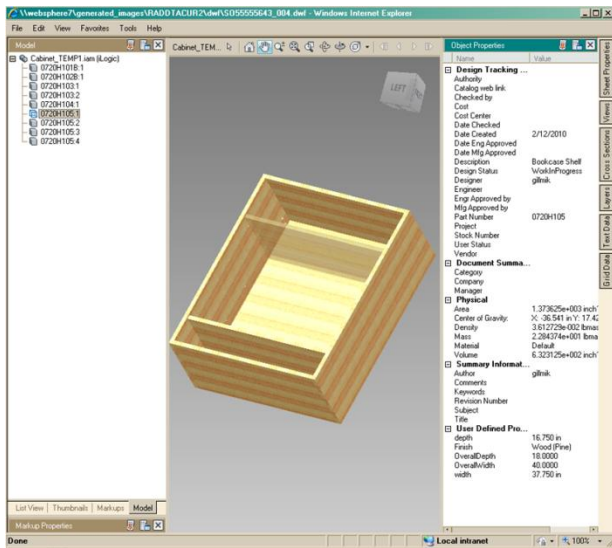


CADFlow for Frontier



- ➔ Enhance the quote-to-sale process with powerful 3D visualization and communication capabilities
- ➔ Speed new product development
- ➔ Reduce engineering costs for custom, “one-off” engineered-to-order configurations
- ➔ Improve manufacturing performance and product comprehension
- ➔ Save time and effort: rapid deployment using your existing models, rules, database and expertise

In complex make-to-order and engineer-to-order environments, the Frontier Product Configurator has always delivered rich functionality throughout the supply chain, from order entry across multiple channels to shop floor scheduling, manufacturing execution, and material procurement. Now, Frontier **CADFlow** allows you to take advantage of the 3D design and visualization capabilities of **Autodesk Inventor**® to accelerate the design and delivery of configured products while reducing cost. CADFlow fully leverages your investment in the power of 3D technology. CADFlow automates the generation of configuration specific detailed 3D models, drawings, and manufacturing data as well as data and images to meet your customer’s requirements. All these benefits can be realized using your **existing models and configuration rules** housed in the Frontier Configurator, with no redundant data to be maintained.

Leverage CAD design skills in model development

The integration between the Frontier configuration engine and **Autodesk Inventor**® allows your engineers to leverage their CAD design skills when developing Frontier product models. Design rules and constraints defined in an *Inventor* model are recognized by Frontier, and violations of those rules are reported back to the user as they configure a product in Frontier. Assemblies defined in *Inventor* can be used to directly drive the multi-level work order structure in Frontier, and the components defined in each sub-assembly can be used to populate the bill of materials for each work order in the structure. This integration reduces the need for duplication of product rules as well as BOM rules.

Flexible implementation for both existing and new models

You have the ability to choose the level of integration that is right for your business. For each Frontier model, you control the “definitive sources” of model rules and data.

Model data housed entirely within Frontier, just as you do today. The Frontier configuration drives the generation of a configuration-specific *Inventor* model representing the product ordered. The *Inventor* model automates the generation of configuration specific CAD drawings, manufacturing documents, and model images.

Model data housed within Inventor. Product configuration order entry options are supplied by Frontier. The *Inventor* model applies rules, defines material, and returns detailed configuration and material requirements back to Frontier, along with the configuration-specific *Inventor* model.

A combination of the above approaches. Make better use of each application’s strengths. For example, there may be calculated configuration values that are readily available within *Inventor* (such as elliptic arc lengths). These specific calculated attributes can be returned to Frontier, reducing the complexity of Frontier’s rules and reducing the replication of information – there is no need to replicate the calculation in Frontier.

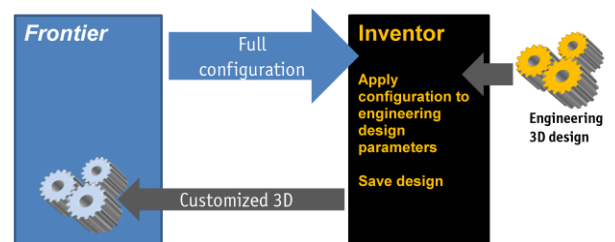


Figure: Generate custom 3D models only

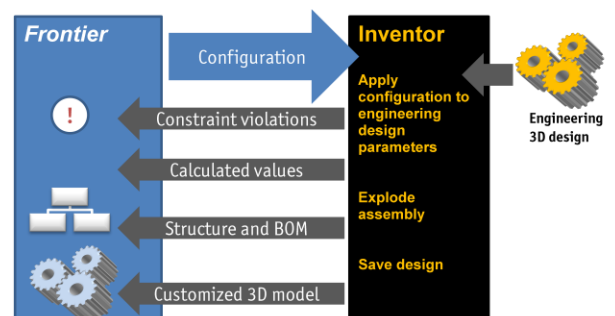


Figure: Leverage Inventor constraints and calculated values

Improve product comprehension and communication

During sales order entry and customer quote entry in *eQuote*, a rendering of the model is displayed as configuration options are selected. If the engineer has defined constraints in the model and one or more of those constraints are violated, those errors will be displayed during the configuration process, along with any messages generated by Frontier configuration rules. The same functionality applies for both in-house order entry and customer order entry using *eQuote*.

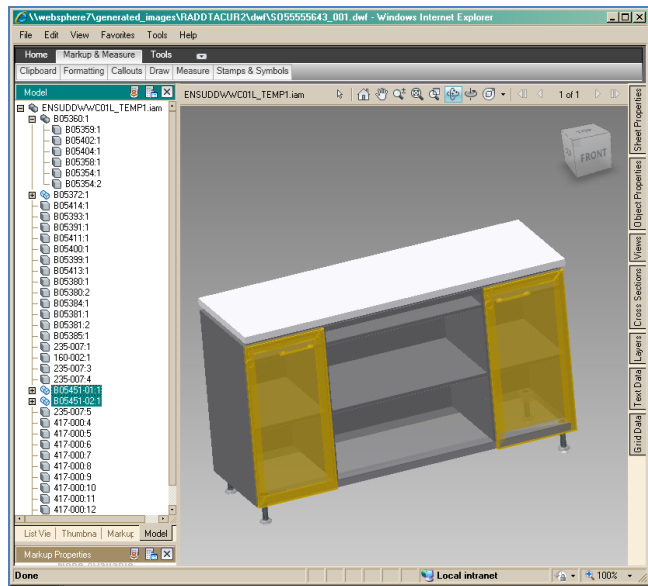
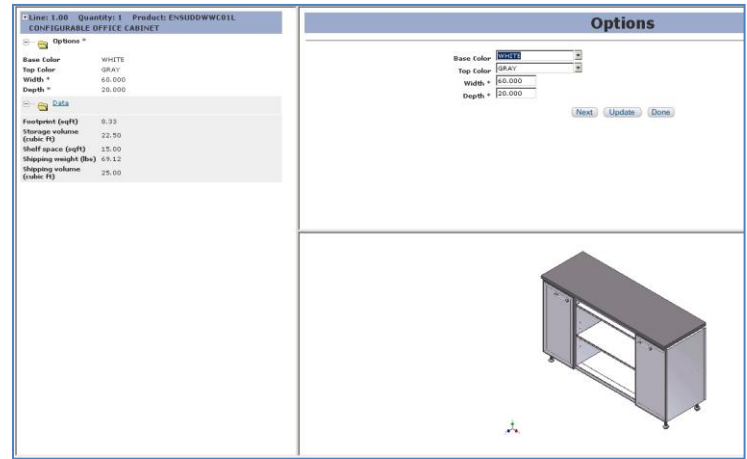


Figure: Full view of 3D model

System architecture

CADFlow leverages your existing Frontier IT infrastructure.

It uses your existing System i and Websphere application servers, and requires no changes to your client workstations. CADFlow runs on its own server where it executes Autodesk Inventor to deliver CAD services. Performance is optimized using advanced cache management, multi-threaded processing, and selectable processing modes. For high-volume applications, processing can be distributed across multiple servers. High-availability is supported when using multiple servers.

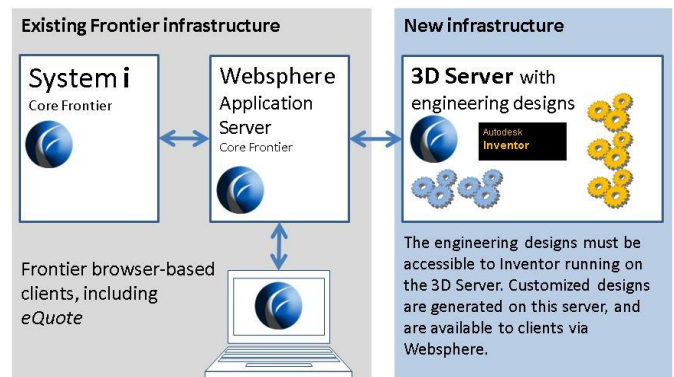


Figure: System architecture

Maximize your Frontier investment

- No additional “configurators” to buy or learn
- Rapid deployment using your existing models
- Tightly-integrated into your existing Frontier workflow
- A solution that grows with Frontier, now and in the future

For more information about Frontier CADFlow, contact:

- Paul Gray, (678) 488-6952
- John Rowell, (847) 987-4380