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Q&A with Fox Valley Spring

Fox Valley Spring's transition to 3D design Q&A with Jeff Schmiedlin, Lead Designer of Fox Valley Spring Company.

With the migration to Autodesk Inventor, Fox Valley Spring has been able to enhance their design capabilities by creating complex 3D models, while increasing overall efficiency, productivity and communication.

- 1 *Fox Valley Spring has been migrating from 2D drafting tools to the next generation of 3D modeling with Autodesk® Inventor®. Can you tell us what you've been working on since that decision was made and where the implementation stands today?*

Prior to our migration to Autodesk Inventor in 2007 we were using AutoCAD LT. Since our purchase, we have been maintaining the current release with the annual subscription.

- 2 *Moving to Autodesk Inventor and a digital design environment offers some obvious and not-so-obvious benefits. Can you cite a few key reasons why this decision was made, and the specific benefits you were looking to achieve?*

Initially, we looked into Inventor simply to decrease our time spent creating blueprints of more complex spring design geometries. Some of these more complex spring designs took as many as 8 to 10 hours to draft with AutoCAD LT®. During the 30 day trial period with Autodesk Inventor, it was quickly evident that I could easily reduce the time needed to create those same prints to about 1 hour. This reduction in time was very important to us since the complexity of the tasks in our design department can lead to a "bottleneck" that slows the overall project. We also liked the FEA capability because it allowed us to greatly reduce the time needed for designing wire forms and stampings.

- 3 *Some parts of the manufacturing community do not fully understand the value and downstream benefits of 3D digital design environment. Do you have any words of encouragement for them at this point?*

If reducing the time needed for design creation isn't itself enough of a benefit, then the increased efficiency of communication should also be considered and appreciated. Communication of design intent is much more easily achieved due to the ability of importing the customer's entire application, allowing us access to additional information that would not be possible in a standard 2D environment. This can furthermore be accomplished without having to leave our plant or have the customer ship us the application (which in some cases is quite large). This added functionality has proven to be quite valuable, particularly with respect to dimensional relationships between components in close proximity to our springs in the final design.

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4 *One concern that some companies seem to have about transitioning to Inventor is the availability of resources to help them migrate to this platform. What other resources might you recommend companies consider to learn more about this transition and the new design platform?*

I believe the key to a successful implementation is finding a partner who provides more than just the software. MasterGraphics provided us with both excellent training and advice. We took part in all of the training they had available off-site which led to immediate benefits in productivity. We also take part in the local user group hosted by MasterGraphics. These user groups provide an excellent resource if you can arrange to take part in one prior to your implementation since the folks who participate have already been through the growing pains of this transition and can provide you with suggestions based on what they learned.

5 *What advice or recommendations can you offer to ensure a successful implementation?*

Aside from training and practice, consider taking advantage of any support program that may be offered. How long you would need that program obviously depends on what kind of work you will be doing, but in our case we needed it for a year. It's likely that there will be a specific and tricky feature you will need to create that will stump you at first – and that was the case with our implementation. Without MasterGraphics' support I wouldn't have been able to perform a task as simple as building an accurate hook on an extension spring.

6 *Were there any specific challenges that you faced and how did you address them?*

Aside from needing the support program when we came across tricky features to build, our implementation was rather smooth. This was largely due to the training we received from MasterGraphics, the practice we enjoyed during the 30 day trial software and the overall experience within our design department.

7 *What are the next steps for your team?*

We like to think of ourselves as a "customer service company that just happens to make springs." With that in mind, we have been considering a 3D-printing technology investment to improve our response to customers that need a spring, wire form, or stamping designed from applications themselves (which we see a lot). This would allow the customer to eliminate the lag time and expense of shipping us the mating components for the application. We would simply have the 3D application e-mailed to us and print what we need that same day or overnight, allowing us to add or subtract mass from the component so that we could actually test how the spring functions with the model.

Visit the Fox Valley Spring website: www.foxvalleyspring.com

Learn more about Autodesk Inventor: www.mastergraphics.com/inventor