Name of Speaker: Bill Nordgren

Title of Lecture: Optimizing Production and Troughput while Decreasing Costs in Turbulent Economic Times

Date of Lecture: 9/19/2013

Introduction

The main presenter was Bill Nordgren, He is one of the founders of FlexSim Software. He started out reselling other simulation products from a company in Europe. They then developed their flagship product called FlexSim, and have been releasing new products about every ten years. Bill obtained a Bachelors of Science degree and a Masters degree both from BYU and currently lives here in Utah Valley. FlexSim is currently located in Orem Utah.

Summary

The lecture began by telling the audience what FlexSim does and who they service. FlexSim is the name of the company and the tool which is used to simulate real life production or work environments. The main focus of this lecture was in the use of queues, or lines as we call them here in “America”. The goal with their software is to show where “bottle necks” or slowdowns in production occur and how to improve them. The concept being that by keeping processes and queues flowing that waste will not occur and thus save the company money. FlexSim has worked with large fortune 500 companies, like Coca-Cola, Shell Oil Company, and General Mills. FlexSim has also worked with lesser known smaller companies to improve their inefficiencies as well.

The next portion of the lecture was product demonstration to show how the software applied and exploits inefficiencies. The demonstration started out with a machine and boxes being processed on the machine after being stacked up on a table. At first the process was automatic. Then, three more machines were added, and then a person was added. While running each of the scenarios it was easy to see the process was efficient while everything was automated. Once the human element was added the machine processing slowed down and the queue of boxes became really large.

The intuitive thought was to add more people to the process and while that helped adding more and more people to the process wasn’t exactly the best solution. The conclusion was that increasing the production of an employee could do more for the process than adding more people to it.

Finally the lecture ended with an interactive learning opportunity demonstration in the form of a zombie game. The company had built this game for children to help them learn the ideas and concepts of manufacturing. This game proved to be a good demonstration of how things are built in a process and that there are some processes that take more time and others that have capacity limitations. In the end you could download this game and give it a try.

Reflection

The presentation was a great representation of how software and simulations can save companies money by improving their processes. Although, it was built for a manufacturing environment, it was easy to see how this could be applied multiple types of industries and situations. While the simulation software was obviously a very powerful tool, I think I took more away from the presentation by things that Bill did not say, rather than the product demonstration and all the things that were said about it.

One of the things I really liked was how software development could be used across multiple industries. It was obvious that multiple designers and software engineers had worked together to put together a good product. There were elements of graphic design, mathematics, statistics, software engineering, and business processes all needed by this software. Their combination of skills and expertise were compiled to make a powerful tool.

Also, I appreciated the community outreach that went along with the game design. The concepts taught in the game are certainly secondary to the fun that the kids playing it want to have. However, they will learn basic fundamental ideas in logic and manufacturing as well as be able to have a good time. In my opinion it always makes a company stronger, when they can do something charitable for others. It makes it even better that it is out there for the community as well.

In considering how these concepts could be applied to my current profession it is difficult because there is not a lot of movement in our field, and there is no manufacturing. However, the collaboration to make a product of this caliber is something that I can take away. As I decide where to put more emphasis in my software development it is a nice reminder that others will rely on what I produce. Also, that what I produce will be in contribution to something that customers and other professionals will use, and thus it is important to learn the concepts now for the future.

Conclusion

In conclusion the speaker presented powerful software that many people had to work on to fit multiple situations and environments. They taught great lessons about how to make things better as well as showed that it can be fun to do.