
JUGGLING TIPS

A newsletter for users of

Juggler by Jambalaya

June 2001

COST BASED OPTIMIZATION

Juggler users usually start with a focus on time-based optimization, particularly when their shop is busy. If business slackens, as is now happening in some sectors of the economy, it may be time to consider a switch to cost-based optimization. Juggler contains a full economic model including electricity, cooling, fuel gas, process gas, maintenance and parts. When you received Juggler, default values were in place for the first four consumables which you may now wish to edit. Cost-based optimization will find the allocation of jobs to machines with the least cost. This can help you maximize profit and reduce costs in many ways:-

- Use less machines
- Reduce # or length of shifts
- Consider selling older, less efficient machines

Remember, whichever optimization you choose, Juggler will always endeavor to find a solution that satisfies all customer due-dates first. If no initial solution satisfies all customer due dates then job priority will be taken into account.

LENS CHANGING

Changing the focal length of the lens in the cutting head is a routine practiced in many shops as they change type or thickness of material on a machine. In effect, each machine is several different "virtual machines" only one of which can be used at any one time. This adds additional complexity to your job scheduling and the next release of Juggler (1.2) due in June 2001 deals with this situation for up to 4 lenses per machine. The job information panel now shows the lens used on a job when it is selected in the Gantt chart; lens changes between jobs are shown by a blue bar representing the time taken for the change. When Juggler optimizes it can be set to minimize the number of necessary lens changes.

TO REPLACE OR NOT?

Even the best machines ultimately reach the end of their economic life and need to be replaced, but determining when that day has arrived is often a "gut-feel" rather than a "fact-based" decision. Juggler can help this situation in two concrete ways - tracking the annual maintenance and spares cost, and showing the recent utilization of the machine. When you've decided on replacement your next hurdle is to sort hundreds of claims and specifications for machines from the many manufacturers. Again, Juggler can assist in this by allowing you to "test-drive" candidate machines with Juggler, for jobs actually processed in your shop.

FUTURE JUGGLING

There are a number of additions or options that we could consider developing for Juggler, and would like our customers' input before we choose which ones (if any) to develop.

- 1)** PDA (Palm or Handspring) output of your schedule.
- 2)** Remote (slave) display of Juggler Gantt Chart through Virtual Network Computing.

Please address your comments to:

Features@jambalaya.ca

Juggler - The Decision Support System for Laser Job Shops