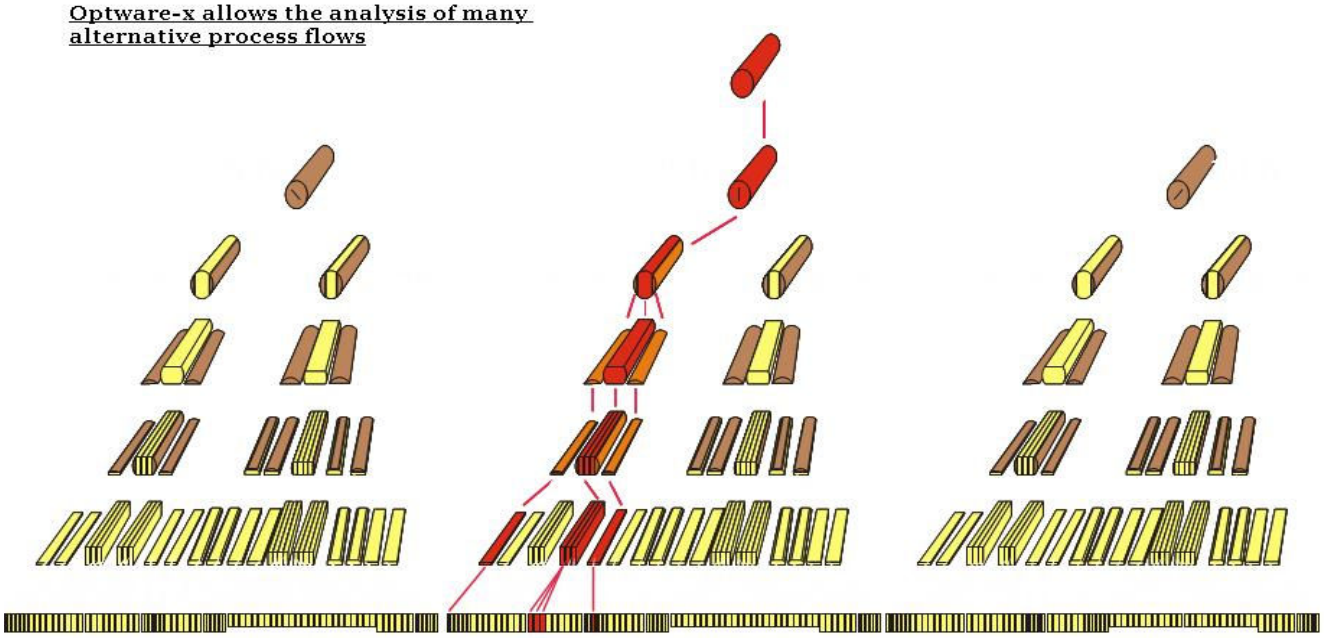
The Measure That Matters

Forest Industry veterans often think of optimization as a better way to cut a log. In sawing optimization computer algorithms are employed in such a way as to maximize the volume or value of lumber from logs of varying characteristics. In bucking optimization a similar approach is employed to ensure that long logs are bucked into the best collection of segments. In business optimization the focus is optimizing the overall business rather than individual processes. The term for this kind of optimization is "Profit Optimization".

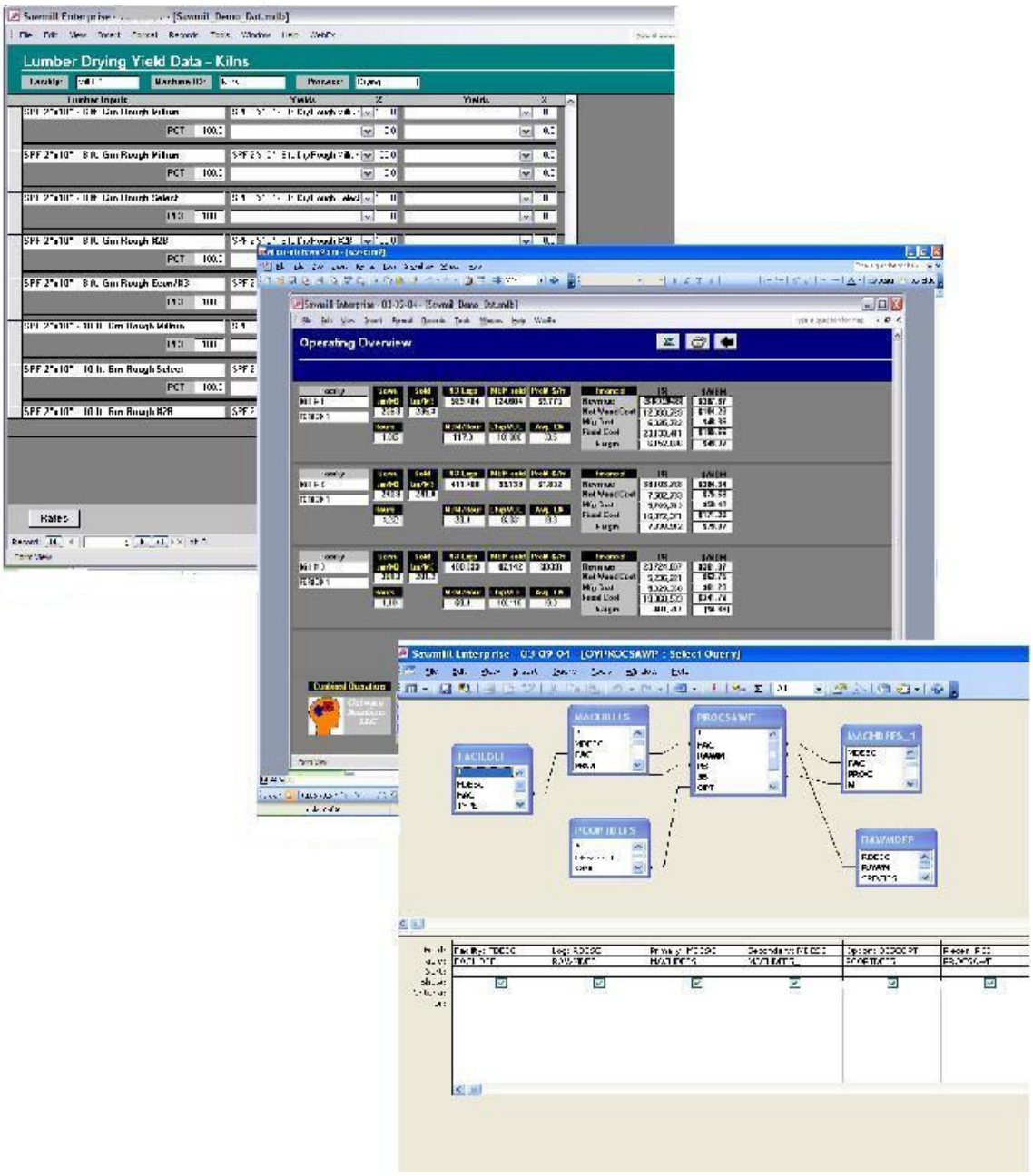
Profit Optimization is a valuable technology for dynamic business environments. The greatest trend observed in the Profit Optimization field in recent years has been the desire to optimize larger and larger business environments. The reason for this trend is the realization by sharp operators that they can capture synergies by optimizing multiple plants as a single business system. No conscientious manager wants to leave money on the table. Profit Optimization yields insights that are not attainable by any other technology.

The new Optware-x System developed by Optware Solutions in Beaverton, Oregon offers a super powerful optimization engine. The software allows managers to proactively plan and optimize activities across multiple mills by creating a virtual model of their business (forest-to-mill-to-market). The software works like a compass pointing out the collection of activities which will result in maximum profits. The new technology makes it practical to model complex multi-facility forest business environments and bring millions of dollars of additional profit to the bottom-line by using all resources more effectively. Optware offers much more value than spreadsheet tools.

Optware-x allows the analysis of many alternative process flows



Optware-x is a PC-based system comprised of a series of modeling building blocks that can be assembled to create a complete simulation of any forest products business environment. A model is a mathematical representation of a "real-world" system. It is an abstraction of reality. Linear Programming is the underlying quantitative tool employed by Optware. The system is endowed with the internal "smarts" to understand how logs are converted to saleable products. The user populates the system database with information specific to his/her business operating environment.



Optware-x uses a modular design which allows a great deal of flexibility. The software is written to be compatible with Microsoft Office® tools such as Microsoft Excel®. Generically, the system is comprised of four basic components: the Windows XP® interface, the database, the model, the optimizer and reports. The user interacts through the interface to access the database, to initiate runs and to review results. The database is the place where data is stored for retrieval. The model is the mathematical representation of the log supply, manufacturing and market environment. The model is easily customized to fit any company's specific operating environment. The user controls the model via the data that is entered into the database. The optimizer solves the equations that comprise the model in a structured way to find the very best combination of business activities as measured by profitability.

The Optware-x System is designed to refine the planning process. It is used to assist decision-making in a number of areas:

-Log procurement decisions (Which logs should we buy?)
-Log allocation decisions (Where should the logs that we harvest be sent for processing?)
-Log processing decisions (How should we convert the logs to maximize total return?)
-Changes in machinery (How much is it worth to increase the speed of the trim saw?)
-Operating policy review (Should we work an overtime shift?)
-Product mix planning (What products should we cut?)
-Curtailment/Consolidation (What is the impact if we close one of our mills?)
-**Capital budgeting** (What would be the result if we added a small-log line to the mill?)
-Order allocation (Given our order file, at which mill should we manufacture each individual order?)

Optimization modeling provides practical insights as to the impact of log mix on the operation of a mill. Wood is always the largest cost item on the income statement in the Forest Industry. The value that is liberated from a given log can vary tremendously by manufacturing facility and conversion option. Processing rates can also vary substantially by facility. The total cash impact is a combination of log mix, log cost, manufacturing cost, product value, and productivity.

Profit Optimization is particularly valuable during times of change. An Optware user recently related how their Optware System has shown them that rising chip prices should influence their cutting strategy more substantially than it has traditionally. The "compass" indicated that recovery is less valuable in the current market indicating that they should cut more square-edge lumber out of selected logs even though the result is lower recovery. The change, when implemented, turned red ink to black. The "sweet spot" as to how to run a mill often varies with changing lumber prices, log costs and manufacturing options. To maximize company-wide profits it is necessary to use a tool that considers all of the tradeoffs on a continuous basis in a comprehensive and objective manner.