Crystal Ball Software and Risk Analysis Tips

(#18) What is Precision Control?

Have you ever asked yourself whether you are running enough trials? Ever worried that you might be wasting your time by running more trials than is necessary? The solution is at hand: Precision Control.

A prominent new feature in Crystal Ball 2000 is Precision Control, which lets you specify a level of precision for your simulation results. You can use the Precision Control feature to either (1) increase the accuracy of your simulations, or (2) increase the speed of your simulations by running just the number of trials necessary to achieve a desired level of accuracy.

Since Monte Carlo simulation uses random sampling to estimate model results, statistics computed on these results, such as the mean, standard deviation, and percentiles, will always contain some kind of error. Generally speaking, as more trials are calculated, the confidence interval narrows and the statistics become more accurate. The new precision control feature uses this characteristic of confidence intervals to determine when a specified accuracy of a statistic has been reached. At that point, the simulation is stopped.

If you set the absolute or relative precision to a low value (or your confidence level to a high percentage), your simulations will be more accurate but might run significantly longer than before. However, if you do not need as accurate a result, you can set the absolute or relative precision to a high value (or the confidence level to a lower percentage) and the simulation will finish more quickly.

Using this feature effectively may require you to experiment with different absolute/relative precision control values and confidence levels.

For more information, see the new *Crystal Ball 2000 User Manual*.

For more information or to contact us, browse to http://helpdesk.crystalball.com

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