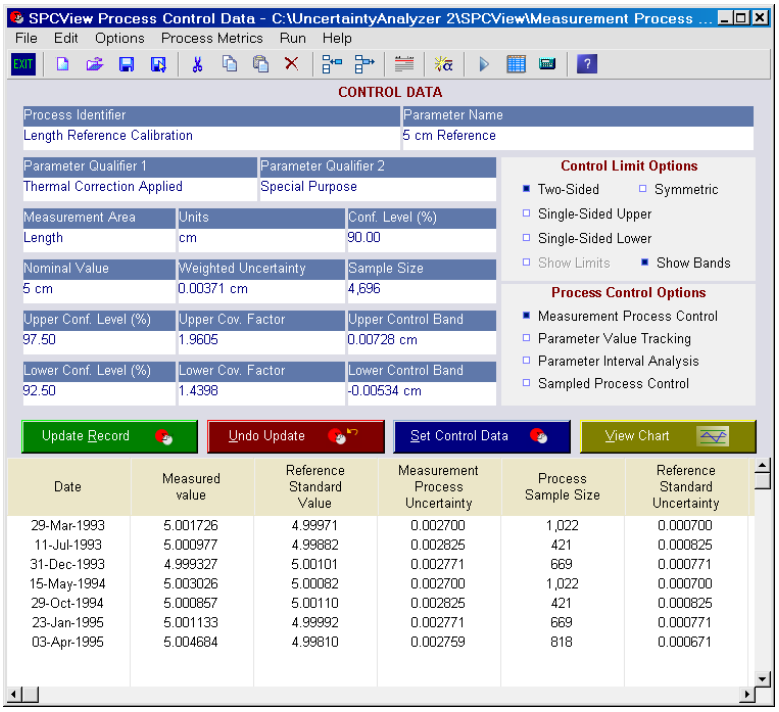
SPCView 1.7

from Integrated Sciences Group

Key Features

A Multifaceted SPC Analysis Tool

- Import UncertaintyAnalyzer results into a process control timeline.
- Develop statistical process control limits.
- View process histories in control charts.
- Model and project drift by linear regression.
- Evaluate outliers.
- Evaluate quality control using process metrics.
- Detect out of control events.
- Test control points and diagnose problems.
- Project bias drift and uncertainty growth.
- Compute calibration intervals for equipment parameters.
- Issue reports complete with control charts and trend analysis.
- Copy charts and data to spreadsheet, word processing and other applications.

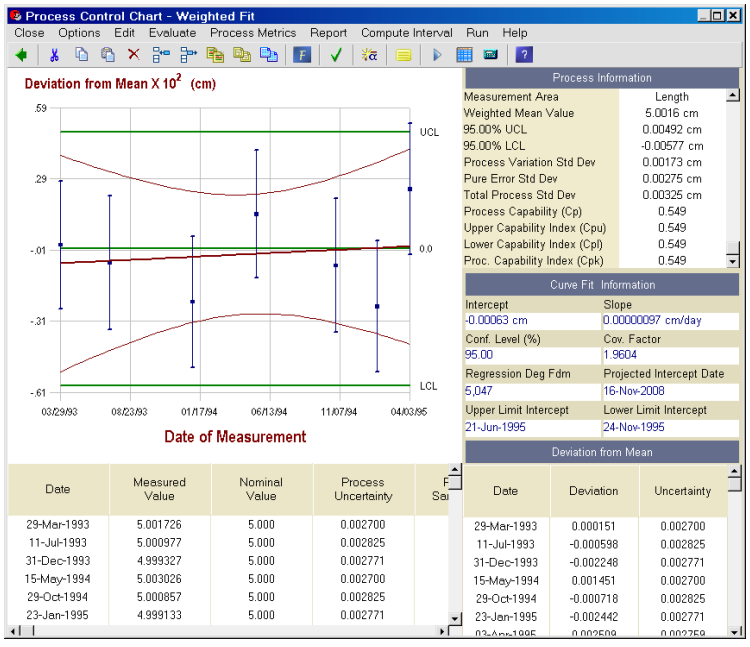


Process Control Histories

- Choose from four process control options:
  - Measurement Process Control.
  - Parameter Value Tracking.
  - Parameter Interval Analysis.
  - Sampled Process Control.
- Enter, paste or import data into the process control history table for analysis.
- Save the contents of the history table, as well as other key information, in an SPCView analysis file (*.spc).

Control Charts

- Display a plot of each control point in the process history along with upper and lower control limits.
- Show optional one-sigma upper and lower error bars.

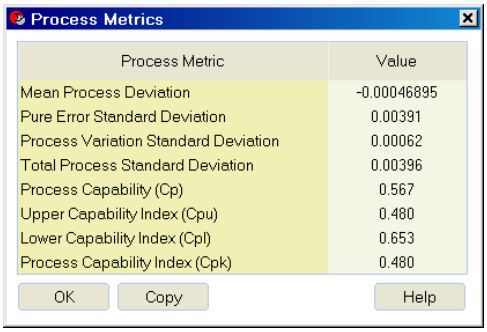


Process Control Limits

- Develop two-sided asymmetric, two-sided symmetric, single-sided upper, or single-sided lower control limits or control bands.
- Enter control limits or bands directly or compute them using a fixed uncertainty or using process statistics.

Process Metrics

- Control process quality using process metrics:
  - Process mean value or deviation
  - Pure error and process variation uncertainties
  - Total process standard deviation
  - Process capability Cp
  - Capability indices Cpu and Cpl
  - Process capability index Cpk



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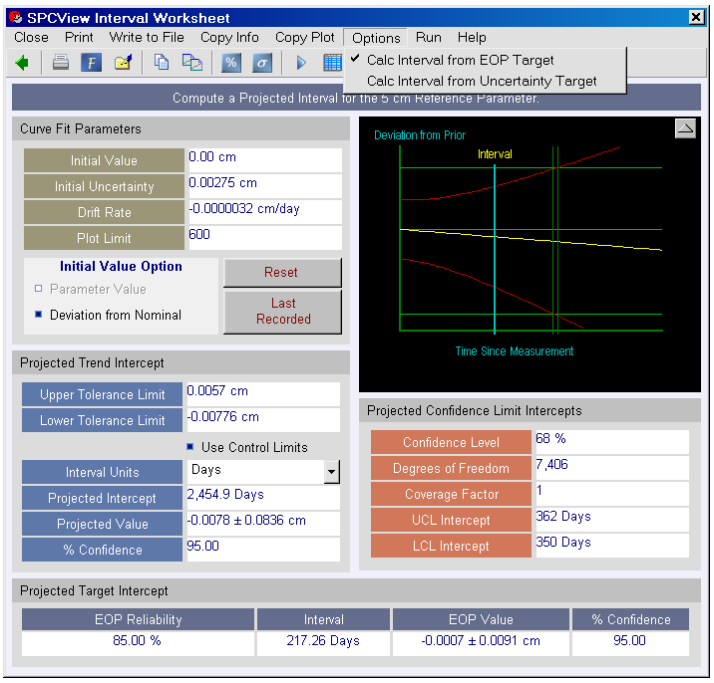
Trend Analysis

- Develop a weighted or unweighted linear regression fit of control point values vs. time, along with bounding upper and lower standard uncertainty curves.
- Display the regression fit on a control chart with projected times for intercept with the control limits or bands.

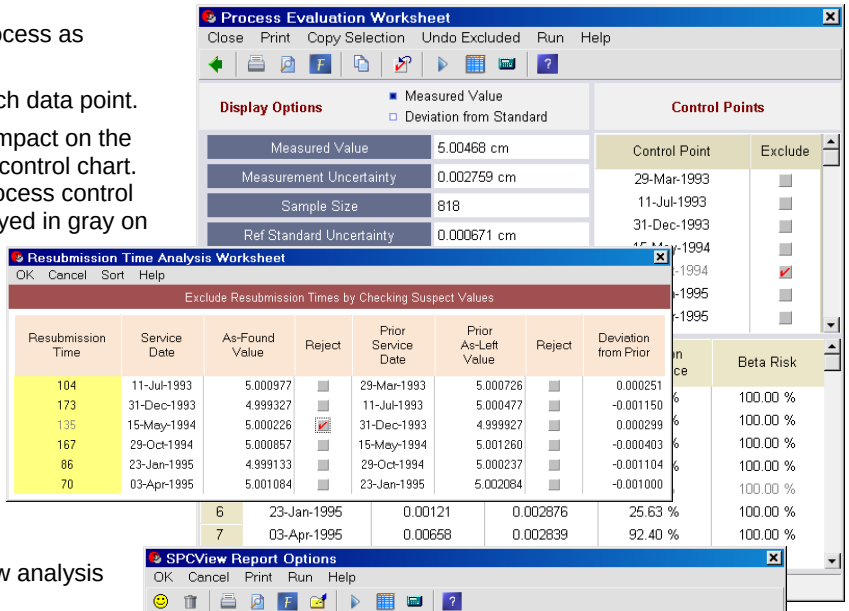


Interval Analysis

- Compute a recommended test or calibration interval commensurate with either a desired confidence level or measurement uncertainty.
- Show the drift rate for the process, projected intercept of the curve fit, and the intercepts of the upper and lower projection limits with the control limits or bands.
- Set the Initial Value and Initial Uncertainty to zero or some other value appropriate for the parameter's interval.
- Select interval time units from a drop-down list.

Outlier Identification

- Compute the confidence for rejecting a process as being out-of -control at a selected point.
- Compute false reject risk (beta risk) for each data point.
- Exclude suspect control points to assess impact on the linear regression fit shown on the process control chart. Excluded points become inactive in the process control history, but are not deleted, and are displayed in gray on the process control chart.
- Use the drill-down **Resubmission Time Analysis Worksheet** to exclude suspect as-found and/or as-left data from Interval Analysis results.
- Sort the Resubmission Time table by Service Date, Resubmission Time, or Deviation from Prior Value.



Analysis Reports

- Generate hardcopy reports of the SPCView analysis results and of the control chart.
- Generate process evaluation reports showing in- or out-of-tolerance status of control points, along with rejection confidences and computed beta risks.
- Report interval analysis results, complete with a trend analysis plot.