MetroCount®
Traffic Data Specialists

Event Count Analysis

MTE User Manual

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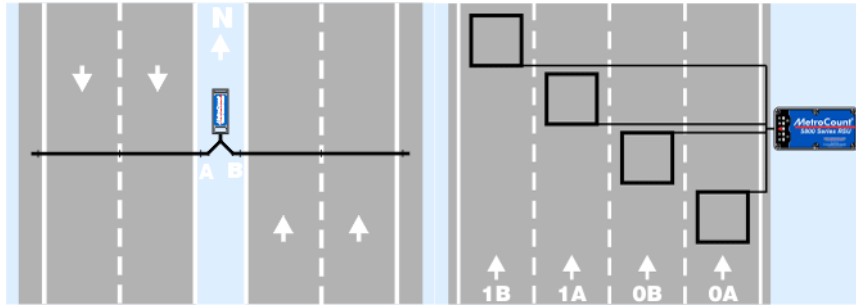
Overview

Events

Event Count reports are used to analyse simple "count" data, typically collected using single axle sensors or vehicle sensors, such as loops. Event Count reports support time-stamped datasets, and binned datasets from RSUs that have a binned-count mode.

Example sensor layouts for typical "count" data

The definition of an *event* is known as the **Count Method,** which is set via an Event Count report's Local Profile. The Count Method can be a combination of raw counts, counts with a division factor, or gaps for time-stamped data.

The two inputs (A and B) from each dataset included in an Event Count report can independently contribute to the totals by adding, subtracting or excluding them. This is known as the **Input Contribution.** For example, given the **Split** sensor layout shown below using tubes, counts for the two lanes can be derived from the **B** input for the left lane, and **A - B** for the right line.
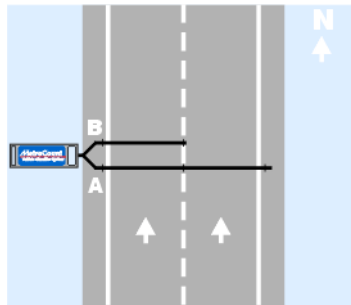
Example Split mode Sensor Layout

Note that since events can be subtracted via the Input Contribution, this can result in negative totals. The meaning of a negative number is entirely application dependent. For example, the net flow at a point could be reported by adding inward inputs, and subtracting outward inputs.
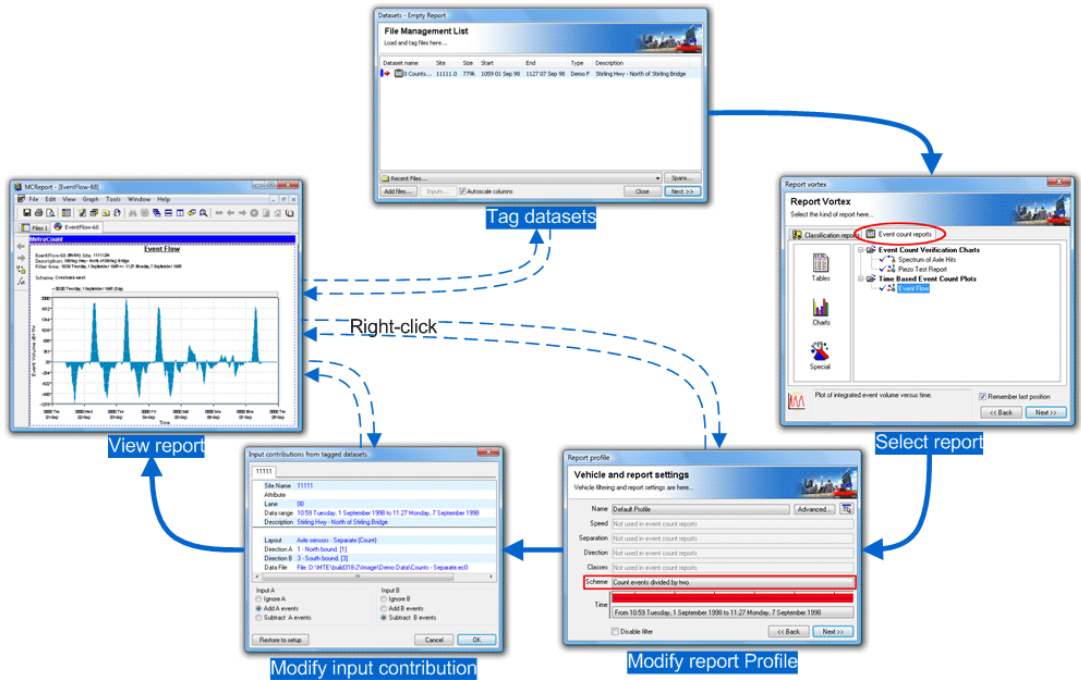
Generating an Event Count Report

Report Wizard

Event Count reports are grouped into a separate page at the top of the Report Vortex. Reports are then divided into the usual sub-groups of tables, charts and special formats.

The Local Profile for an Event Count report uses the **Scheme** button to set the desired Count Method, with all the vehicle filter settings disabled. The **Advanced** Profile options contain all the usual report formatting options, with the vehicle-related options removed.

The Input Contribution for each of the tagged datasets is displayed as an extra step in the Report Wizard after the Local Profile. A separate page appears at the top for each of the tagged datasets.

Report Wizard for Event Count reports

Count Method

To set the Count Method for an Event Count report, click the **Scheme** button in the report's Local Profile, and select one of the options in the **Event Count Method** drop-down list at the bottom.
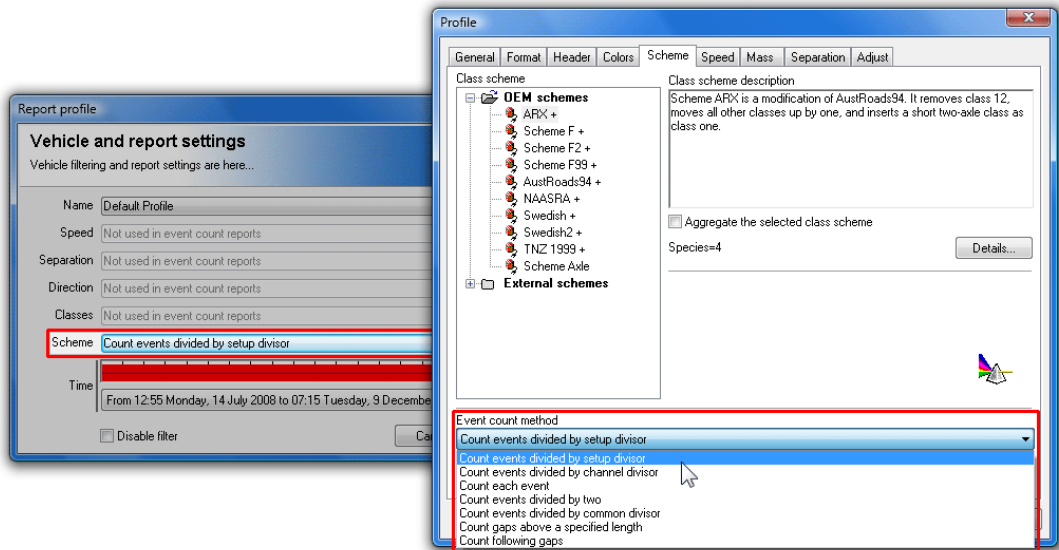
Setting the Count Scheme for an Event Count report

The default Count Method is **Count events divided by setup divisor,** which automatically sets a division factor based on the Sensor Layout used for each dataset - divide-by-one for vehicle sensors (loops), and divide-by-two for axle sensors (tubes and piezos). This allows data from different sources to be combined in a single report.

Count events divided by channel divisor uses a custom divisor for each dataset included in an Event Count report. The divisors are specified in the **Input Contribution** dialog box.

Count each event, Count events divided by two and **Count events divided by common divisor** apply the same division factor to all datasets. The common divisor is specified immediately below the Event Count Method.

Counting gaps can be used with time-stamped data. Gaps above the specified length are divided by the specified gap and the total added to the event count at the start of the gap. This can be further qualified by specifying a start gap, usually longer than the specified following gap, for examining entering capacity.

The **Interpolate binned data** option relates to Event Count reports with a bin size smaller than the bin size of a binned dataset. Take for example a binned dataset with hourly bins, and an Event Count report with five-minute bins. With this option on, the hourly bins will be evenly distributed across the five-minute bins. With this option disabled, the hourly counts will appear in the first five-minute bin.

Input Contribution

The **Input Contribution** dialog box is used to set how each of the inputs (A and B) for each of the tagged datasets are combined in an Event Count report. Each tagged dataset is presented in a separate page at the top.
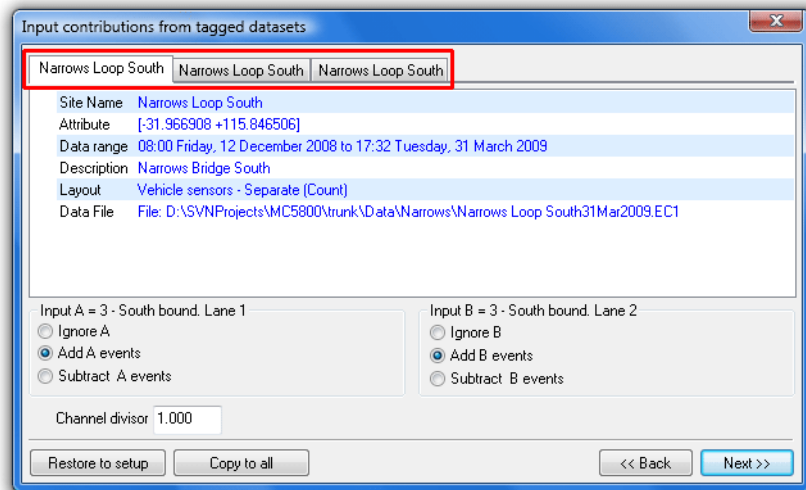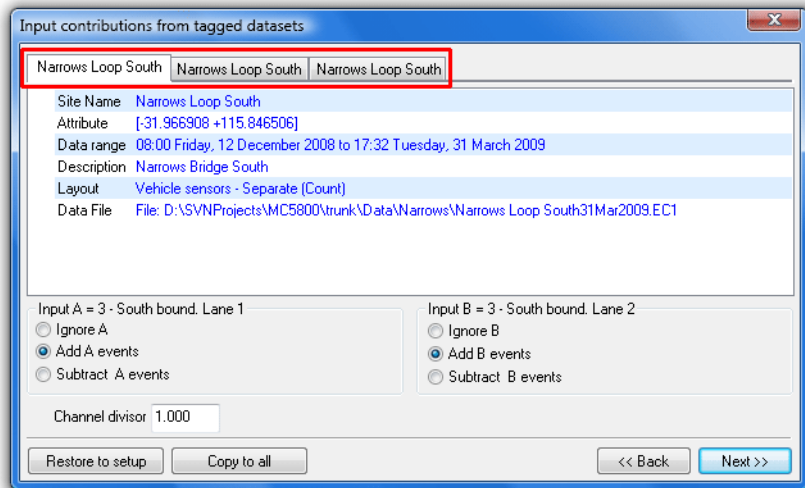

Setting Input Contribution for an Event Count report

Each input can be added, subtracted or ignored from an Event Count report. A separate tally is kept for each **Lane** number specified in each dataset.

The default Input Contribution for a dataset depends on the Sensor Layout used. For vehicle sensors, the default contribution is to add all inputs. For axle sensors, the default contribution is the **A** input only, which is given by **Add A** and **Ignore B.** For a split layout, the contribution will default to "Add A" and "Subtract B", which gives the secondary lane.

The **Channel divisor** is used with the **Count events divided by channel divisor** Count Method, to set a unique divisor for each dataset.

The Input Contribution for an existing Event Count report can be changed by right-clicking on the report, and selecting **Datasets** to display the File Management List. Click the **Inputs** button at the bottom to change the Input Contribution.

Setting Input Contribution for an Event Count report

Event Count Reports

Tables and Charts

MCReport's Event Count reports are divided into Tables, Charts and Special formats. The **Weekly Event Counts**, **Event Counts** and **Event Flow** reports are similar to their corresponding classification reports. The Special reports emulate several "standard" report formats.
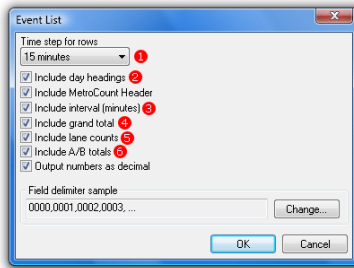
Note that the **Event Flow** report can show multiple traces the grand total of events, as well as individual lanes counts and the A and B totals. To change the included totals, right-click the report, select **Properties.**
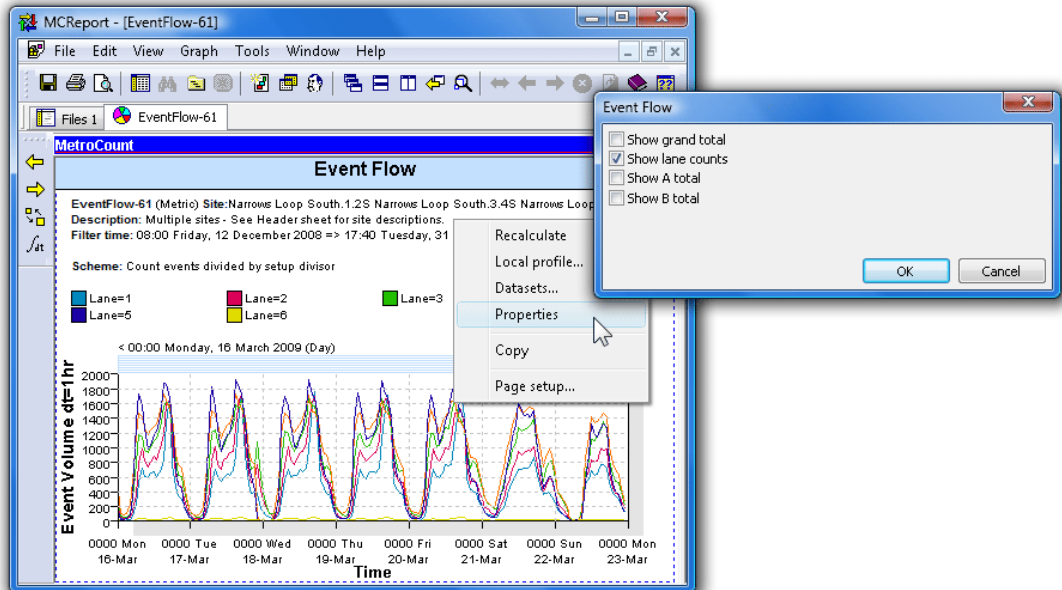
Event Flow report showing all lanes

Event List Report

The Event List report is a tabular format that bins events, and is useful for exporting event data. The report includes a row for each bin or time step, which can range from five minutes to 24 hours.

Event List report format

The **Include day headings** option breaks the time steps into 24-hour blocks by inserting the date. The **Include column for interval** option displays the time step length in minutes.

Columns for the event count grand total, individual lane counts, and A and B totals can be optionally included.

The Event List report also has optional field delimiters, which can be set by clicking the **Change** button. The default is to separate columns with a comma.

The Event List formatting options are displayed at the end of the Report Wizard. These options can be accessed at any time by right-clicking on the Event List report, and selecting **Properties.**

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