

MTE v3.1x

What's New

3.18

October 2007

Core Programs

Overview

MetroCount Traffic Executive is now comprised of three core components:

- MCSetLite for Roadside Unit management and control using hand-held devices in the field,
- MCSetup (formerly MCSurvey) for compiling Site Lists and RSU Configuration Lists, and desktop/laptop RSU control, and
- MCRReport for all data file management and analysis tasks.

MCSetLite

- Full locale and multi-language support.
- Configurable RSU support from Configuration List.
- Multi-channel RSU support.

MCSetup

- Configuration List compilation for configurable RSUs.
- Locale compliant Site Lists.
- Compressible image formats for Site List maps.

MCRReport

- Locale and multi-language support for reports.
- Amalgamation of MCFiler's file management tools into one program.
- Tabbed view.
- Separation Analysis as headway or gap (with overhang compensation).
- Major changes to the Custom List report, including virtual day and week summaries.
- Numerous new reports, including Event List report.
- New class schemes, including aggregation by scheme (replaces Superclassing).
- Binned count support in Event Count reports.
- User-definable header and footer.
- Automatic speed limit setting from site description.
- Additional speed limit thresholds.
- New time filter auto-wrap settings.
- File searching.
- New XSL transforms for exporting Custom List report to MS Office applications.
- Automatic direction setting in report Profile.
- Load/Save report Assembly.
- Profile version update feature.

XML Output

Introduction to XML

Extensible Markup Language (XML) is a format for describing structured data. Through the use of Extensible Stylesheet Language (XSL) transformations, it is possible to transform XML data understood by one application, into XML data understood by another application.

MCReport's Custom List report has an option to produce XML, and optionally apply an XSL transformation. MTE is supplied with several XSL samples, so an understanding of XML/XSL is not necessarily a requirement.

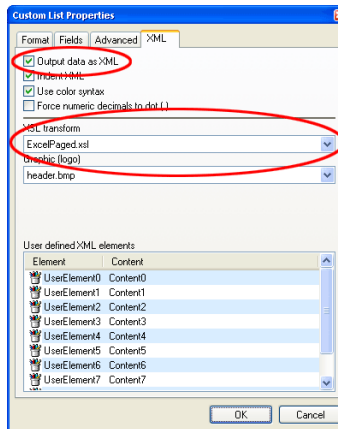
The included XSL samples transform the Custom List XML into the following XML formats:

- HTML (Internet Explorer 6, Word XP/2003)
- Spreadsheet ML (Excel XP/2003)
- Database Table XML (simple **Table/Row/Column** structure)

Choosing a Stylesheet

The option to output a Custom List report in XML can be found in the **XML** page of the **Custom List Properties**. When the report is calculated, MCReport will display the raw Custom List XML.

This page also contains a list of available XSL transforms (found in your **User \ XML** folder) to associate with the Custom List XML. This can be seen as an XML Processing Instruction at the start of the Custom List XML, which will be used by the XSL processor. For example, `<?xml-stylesheet type="text/xsl" href="ExcelPaged.xsl" ?>`.



Custom List XML output options

Processing Custom List XML

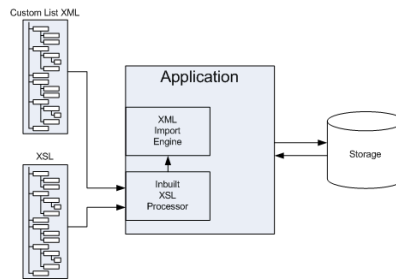
MCRReport provides two options for processing your Custom List XML, which can be found in the **Tools** menu:

- Preview XSL transform
- Apply XSL transform

Preview XSL Transform

In Preview mode, MCRReport examines your chosen stylesheet for a **PrimaryTarget** XSL parameter. This is a **Program ID** of the application to which MCRReport will pass the Custom List XML for processing. For example, `<xsl:param name="PrimaryTarget">Excel.Sheet</xsl:param>` will launch Excel. The target application detects the Stylesheet embedded in the Custom List XML, performs the XSL transform, and imports the result.

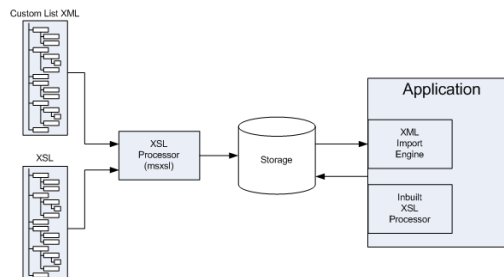
If a **PrimaryTarget** is not specified in the XSL transform, MCRReport will launch the default application associated with XML files.



Preview XSL Transform flow

Apply XSL Transform

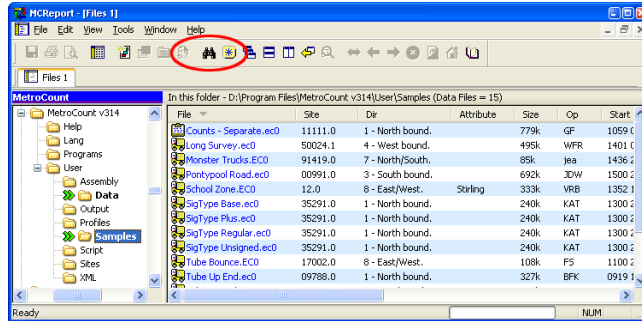
In Apply mode, MCRReport passes the Custom List XML and the selected Stylesheet to a XSL Processor, which is installed with MTE. This writes the transformed XML to a separate file, which can then be double-clicked, or manually imported into an application.



Apply XSL Transform flow

File Search

MReport's File Tree now includes a File Search feature. Simply select a folder you wish to search, and click the **Search** button on MReport's main toolbar.

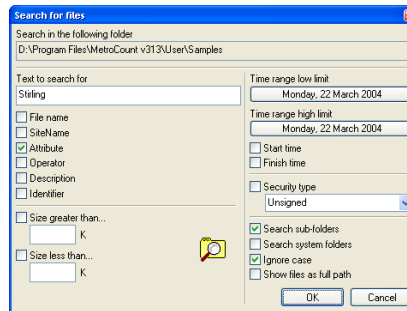


Starting a File Search

Search criteria can include:

- Simple text search of data files' header details, such as Site or Operator.
- Survey start and/or finish times.
- Physical file size.

MReport can search all of a folder's subfolders. Results are displayed in the same list, with each file's full path.



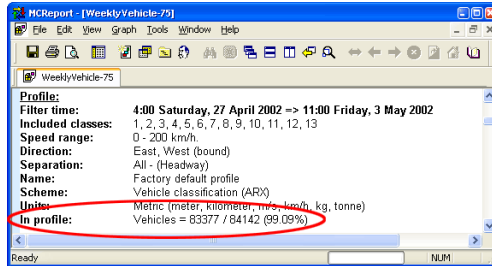
File search criteria

Profile Percentage

A report's header now includes a line displaying the number of vehicles or events included in the calculations of a report, versus the total number of vehicles or events available in the tagged datasets.

This is to alert you to occasions where an unexpected percentage of vehicles is being ignored due to Profile filtering, such as speed, direction or separation.

Note that **In Profile** will rarely be exactly 100%. Slight trimming will usually occur from common time filtering, such as aligning to hours.



Percentage of vehicles filtered through the Profile

Report Assemblies

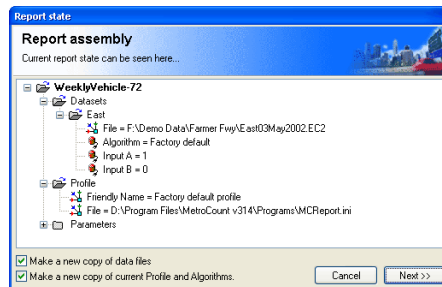
Saving

MCRReport now has a feature to save the current report as an **Assembly**, which includes:

- The tagged datasets.
- The local Profile.
- Algorithm settings.
- Custom List properties.

When an Assembly is loaded, a new copy of the report is automatically generated.

Assembly Load and Save functions can be found in MCRReport's **File** menu.



Saving a report Assembly

File References

Saving a report Assembly creates a text file with a **.stx** extension. By default, references to datasets, profiles and so on will have absolute paths. This means when loading an Assembly, it expects to find all files in their original location.

There are two options when saving an Assembly, to copy data files, and other support files, to the same folder as the Assembly file. File references will have a relative path, and can therefore be copied around as a group, even to another PC.

New Header Format

Data files created using version 3 of MCSetLite or MCSetup have a new header format that is incompatible with MTE version 2. MTE version 3 must be used to analyse these files.

A version 3 data file can be converted to version 2 using the **Transform data file** feature in the File Tree.

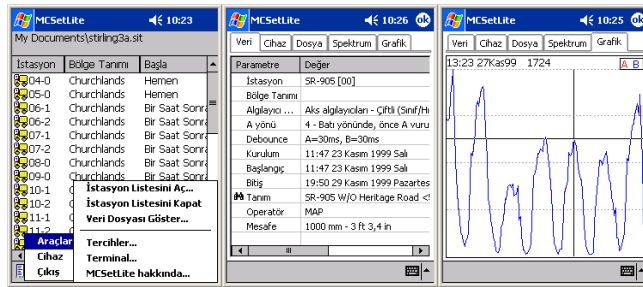
Globalisation

Language and Locale

MTE v3 introduces a unique globalisation system. Using your operating system's Regional Options, MTE automatically selects an appropriate language (where available) and uses the standards and formats for your locale. Script based (such as Arabic) and RTL (right to left) languages are not supported.

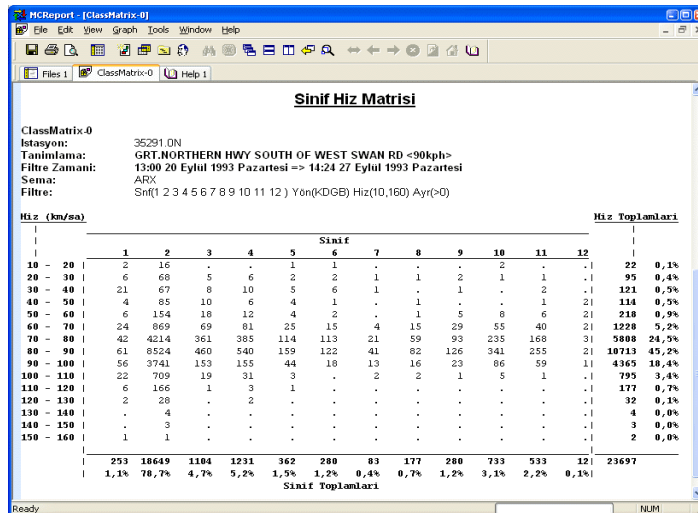
Each language is stored in a separate language look-up table, protected by a digital signature, ensuring integrity and compatibility. The locale encompasses date, time and number formats, and list separators.

MCSetsLite, being the primary field software, is fully globalised. All menus, operations and messages are translated into the available languages. Date and number formats are detected from Windows CE. Site Lists automatically determine the list separator used to create the list.



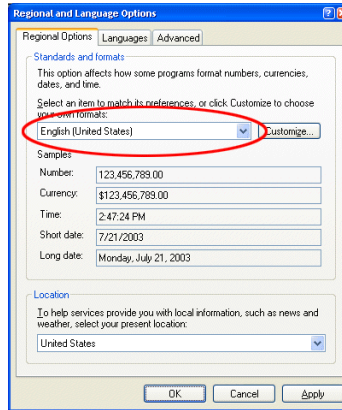
MCSetsLite Globalised

MCReport fully supports all locale settings (date and number formats), and all report output is multi-language enabled. Reports have been reformatted where necessary to cater for strings of arbitrary length.



Globalised reports

Locale and language settings can be changed on the fly from your operating system's Control Panel. If the locale of an unsupported language is selected, MTE will display a warning and default to US English.



Changing your OS locale (Windows XP)

Alternate Weekend

The Culture page of the Advance Profile settings contains an option for regions with alternate weekends of Thursday and Friday. All weekday and weekend totals and averages are calculated accordingly. Weekend days are underlined in the reports.

	Sat 04 May	Sun 05 May	Mon 06 May	Tue 07 May	Wed 08 May	Thu 09 May	Fri 10 May	Averages	
Hour:								- 5 1 - 7	
0000-0100	449	478	206	171	211	238	252	303.0 290.7	
0100-0200	289	356	134	162	153	152	187	218.8 204.7	
0200-0300	196	248	84	90	85	122	129	140.6 136.3	
0300-0400	182	211	93	90	113	100	93	137.8 126.0	
0400-0500	143	141	142	139	143	154	147	141.6 144.1	
0500-0600	232	169	327	341	368	326	340	287.4 300.4	
0600-0700	535	333	899	945	960	904	924	734.4 797.1	
0700-0800	672	448	1622	1725	1674	1666	1655	1225.2 1351.7	
0800-0900	915	637	<u>1788</u> <	<u>1963</u> <	<u>1913</u> <	<u>2000</u> <	<u>2061</u> <	<u>1443.2</u> <	<u>1602.4</u> <
0900-1000	1049	728	1362	1392	1442	1414	1391	1194.6 1254.0	
1000-1100	1196	935	1230	1285	1293	1314	1337	1187.8 1227.1	
1100-1200	<u>1242</u> <	<u>1054</u> <	1204	1211	1271	1308	1379	1196.4 1238.4	
1200-1300	<u>1540</u> <	1052	1304	1262	1312	1360	1451	1294.0 1325.9	
1300-1400	1357	1011	1330	1302	1346	1294	1400	1269.2 1291.4	
1400-1500	1084	1005	1369	1349	1424	1482	1491	1246.2 1314.9	
1500-1600	1074	1109	1578	1603	1607	1636	1674	1394.2 1468.7	
1600-1700	1144	<u>1122</u> <	1812	<u>1908</u> <	<u>1890</u> <	<u>1933</u> <	<u>1797</u> <	<u>1567.2</u> <	<u>1652.3</u> <
1700-1800	1284	1048	<u>1817</u> <	1727	1799	1662	1743	1535.0 1582.9	
1800-1900	1076	821	1269	1405	1457	1312	1450	1205.6 1255.7	
1900-2000	771	546	741	847	854	855	980	751.8 799.1	
2000-2100	613	504	584	678	680	675	641	611.8 624.7	
2100-2200	497	459	514	553	625	614	605	525.6 549.6	
2200-2300	599	340	413	469	508	519	606	465.8 493.4	
2300-2400	616	267	260	316	345	373	484	360.8 380.1	

Alternate Weekends

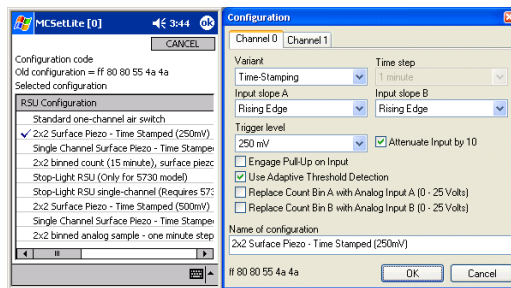
MC5700 Series RSU Support

Configuration

The MC5700 series RSU is configured as two pairs of inputs, known as channels. Each channel can be independently configured with the following parameters:

- Variant - disabled, time-stamping, or binned count.
- Input triggering - slope, absolute level and adaptive level.
- Input adjustment - attenuator and pull-up.
- Optional analog reading via A/D converter.

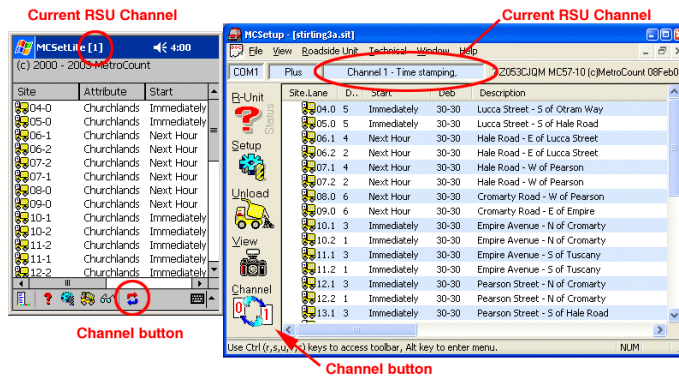
A RSU's configuration is set by selecting from a list of common configurations in either MCSetLite or MCSetup. The list can be modified using MCSetup.



Configuration List in MCSetLite, and editing in MCSetup

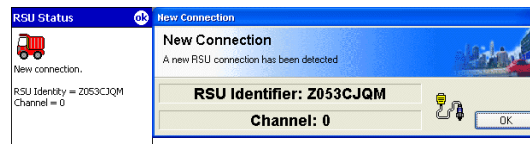
Switching Channels

Each channel of a MC5700 RSU is controlled independently of the other. The four main functions of Status, Setup, Unload and View apply to the currently selected channel, which is displayed in the status bar. The channel can be switched using the **Channel** button on the main toolbar.



Switching channels

When the first operation is performed on an RSU for a new session, a **New Connection** dialog box is displayed showing the RSU's current channel. This will be displayed again when switching channels.



New connection established

Binned Count Data

The MetroCount 5700 series RSU has an optional binned count mode, where events are counted and binned at a user defined interval for each input.

Binned data can be used with any of MCRReport's Event reports, with optional interpolation (distributing the counts evenly across the bin interval).

Remember, time-stamping should be used for vehicle data.

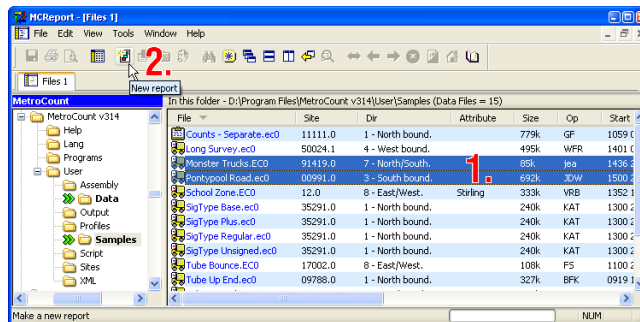
MReport User Interface

File Tree

The functionality of MCFiler has been incorporated into MReport, including:

- Browse and organise data files by their survey parameters.
- Rapidly assess data file quality en-mass using the Hits and Spectrum graphs.
- Directly load data files into the File Management List.
- Edit data file survey parameters to correct user error.
- Compile summary reports of data files.

This File Tree is now the primary means of loading data files into the File Management List. Simply select one or more files, and click the **New report** button.

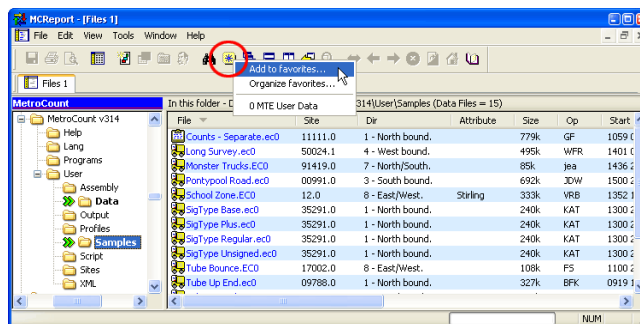


Loading datasets into the File Management List

Favourite Places

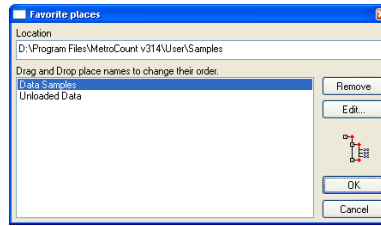
MReport's Favourite Places is a list of favourite folders or help topics you compile.

For example, with a File Tree window active, simply click the **Favourites** button to select from a list of favourite folders. To add the current folder to your favourites, select **Add to favourites**.



Adding folders to your Favourite Places

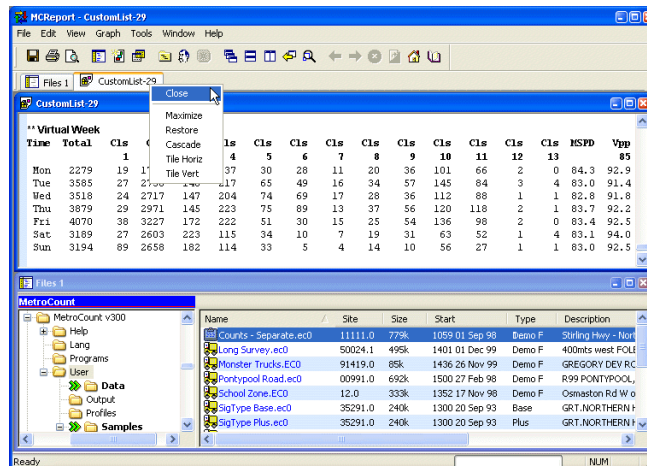
Friendly names can be given to favourites by selecting **Organise favourites**. The order of favourites can be adjusted by dragging.



Organising Favourite Places

Tab Bar

MReport's Tab Bar provides rapid switching between all your open windows, including File Trees, reports and Active Help windows. The common window arrangement functions are provided by right-clicking on a tab. Note that File Tree windows are grouped at the start of the Tab Bar.

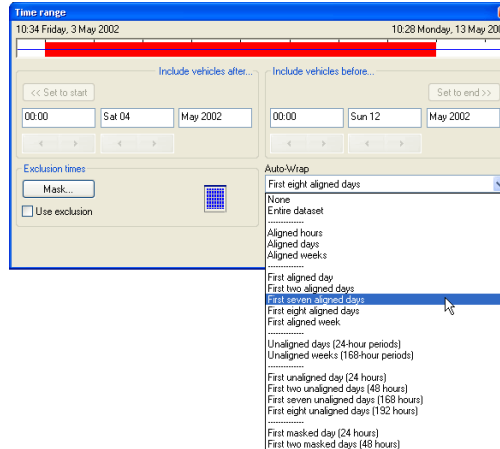


Switching between reports using the Tab Bar

Time Filter Wrapping and Alignment

Auto-wrap

The Auto-wrap options automatically adjust the Time Filter to a selection of common filtering requirements. If the selected wrap type cannot be applied to the available data, the time range bar will flash.



Time Filter Auto-Wrap options

Aligned Wrap

Aligned Auto-wrap options adjust the time filter to the maximum number of the selected time increment (hour, day or week), aligned to the selected time increment.

Put simply:

- Aligned Hours wraps to complete hours.
- Aligned Days wraps to complete days, starting at midnight.
- Aligned Weeks wraps to complete weeks, starting midnight Monday.

Unaligned Wrap

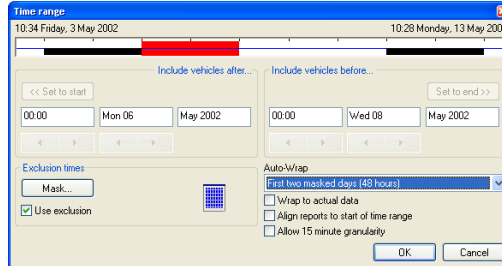
Unaligned Auto-wrap options adjust the time filter to the maximum number of the selected time increment (hour, day or week), but only aligned to hours.

For example, **First two unaligned days (48 hours)** will select the first two days of data, aligned to the first complete hour.

Masked Wrap

Masked Auto-wrap options select the maximum number of contiguous time increments not masked by the Time Mask.

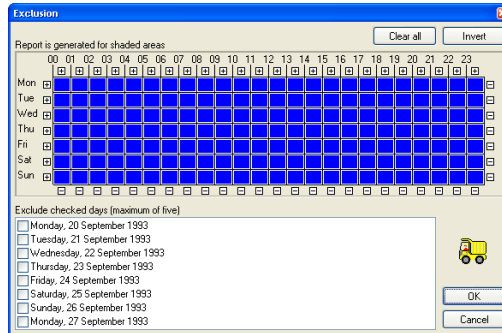
For example, say you have a requirement for 48 hours of **weekday** data. Simply mask weekends using the Time Mask, then select **First two masked days (48 hours)**.



Auto-wrap with weekends masked

Exclusions

The **Exclude checked days** option is now grouped with the Time Mask.



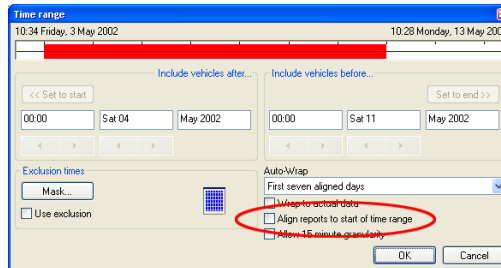
Time Filter Mask

Report Alignment

The **Align reports** option changes the beginning of reports to the first time step (option checked), or the *natural* division.

Take for example the Weekly Vehicle or Daily Classes reports. The natural division of these reports is weeks, starting at Monday (or Saturday for alternate weekends). Checking this option will start the report at the first day in the selected time range. This is extremely useful for printing a complete week of data on a single page.

Note that appropriate use of the **Auto-Wrap** and **Wrap to actual data** options may be required to avoid partial time steps of data.



Aligning the start of reports

Hour	Sat 28 Feb	Sun 01 Mar	Mon 02 Mar	Tue 03 Mar	Wed 04 Mar	Thu 05 Mar	Fri 06 Mar	Averages 1 - 5	1 - 7
0000-0100	67	92	26	12	23	33	36	26.0	41.3
0100-0200	19	36	4	9	6	12	18	9.8	14.9
0200-0300	17	21	4	0	6	6	5	4.2	8.4
0300-0400	10	24	8	7	6	4	4	5.8	9.0
0400-0500	38	8	16	22	24	20	19	20.2	21.0
0500-0600	89	83	123	139	120	126	142	130.0	117.4
0600-0700	93	56	148	169	171	168	181	167.4	140.9
0700-0800	171	88	428	425	403	410	405	414.2	332.9
0800-0900	249	117	<u>705<</u>	<u>698<</u>	<u>686<</u>	<u>680<</u>	<u>694<</u>	<u>692.6<</u>	<u>547.8<</u>
0900-1000	396	210	576	492	516	534	583	540.2	472.4
1000-1100	531	420	477	425	478	466	443	457.8	462.9
1100-1200	<u>582<</u>	<u>433<</u>	482	378	492	475	535	472.4	482.4
1200-1300	<u>608<</u>	<u>552<</u>	524	471	489	542	591	523.4	539.6
1300-1400	590	407	529	508	599	532	642	562.0	543.9
1400-1500	480	470	585	540	591	558	<u>798<</u>	614.4	576.0
1500-1600	476	488	629	592	634	611	698	632.8	589.7
1600-1700	510	465	746	705	719	720	687	715.4	650.3
1700-1800	447	462	<u>832<</u>	<u>754<</u>	<u>828<</u>	<u>768<</u>	654	<u>767.2<</u>	<u>677.9<</u>
1800-1900	435	414	525	581	543	614	509	554.4	517.3
1900-2000	367	315	359	359	409	421	416	392.8	378.0
2000-2100	254	228	248	284	247	321	301	280.2	269.0
2100-2200	163	142	231	253	275	295	229	256.6	226.9
2200-2300	124	139	162	181	203	217	166	185.8	170.3
2300-2400	159	84	62	75	95	122	144	99.6	105.9

A Weekly Vehicle Report, aligned to the first day (weekends underlined)

Direction Filter

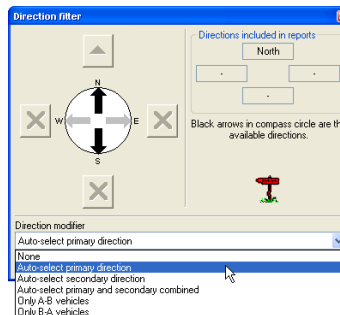
Primary and Secondary Directions

The Direction Filter in the report Profile now includes options to automatically set the directions.

For example, given a bidirectional dataset with a direction code of **North bound A>B, South bound B>A**, the Primary direction is North, and the Secondary direction is South.

Some points to note on using Auto-selection:

- When an Auto-select option is chosen, the four direction buttons will be disabled, but will still indicate the auto-selected directions.
- When multiple datasets are tagged, the first tagged dataset in the File Management List is used to auto-select the primary and secondary directions.
- When multiple datasets are tagged, and there are conflicting directions (say one North-South, and one East-West), all four directions will be disabled to highlight the conflict.



Auto-selecting the Direction Filter

A>B and B>A Directions

The Direction Filter also includes two options for filtering on A>B or B>A directions, as well as the compass points.

This feature is useful for inflow / outflow applications. A group of RSUs can be configured around a site with all A>B directions inbound, and all B>A directions outbound, then combined into a single report, filtered for inbound and outbound.

Separation Analysis

Separation Settings

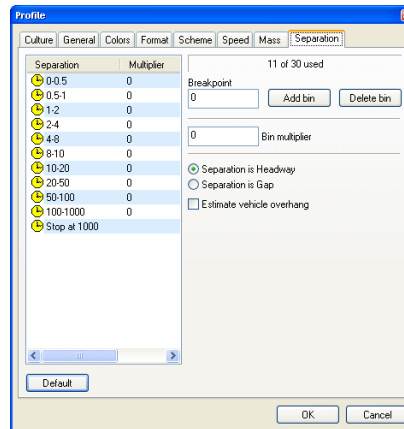
MCRReport v3 introduces tools and reports for vehicle separation analysis. Separation settings are stored in the Advanced Profile settings.

Separation can be optionally defined as:

- Headway - time between the first axles of two vehicles travelling in the same direction.
- Gap - time between the last axle and first axle of two vehicles travelling in the same direction.

When using Gap, an optional overhang estimation can be applied to compensate for the difference between vehicle wheelbase and actual length.

Up to 30 separation bins can be defined for reports that provide a tabular display of vehicle separation distribution. Each bin has an optional Multiplier for weighted separation analysis.

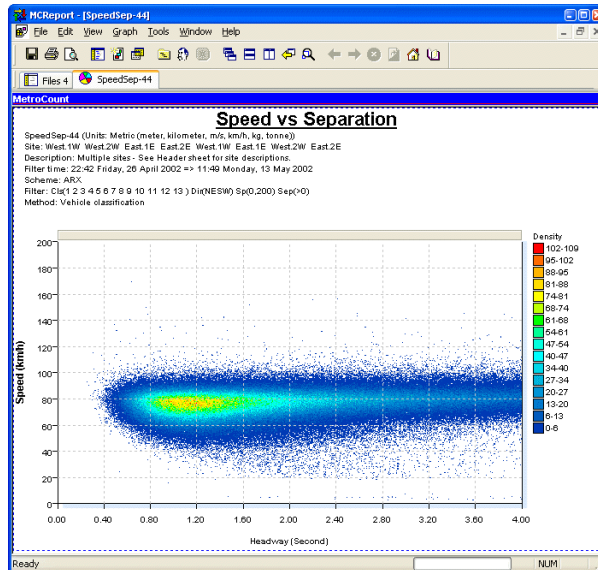


Separation settings in the Advanced Profile settings

Separation Reports

Reports supporting separation analysis include:

- Speed Separation Matrix - table of speed bins versus separation bins.
- Separation Statistics - table of separation bin distribution with above and below ogives.
- Separation Statistics by Hour - virtual day of separation bin distribution with mean.
- Average Separation Plot (against time).
- Speed versus Separation Dispersion Plot - examine trends of separation with speed.
- Separation Histogram.
- Custom List - columns for separation bins, percentages and multiplier totals.
- Individual Vehicles - separation reported for each vehicle.

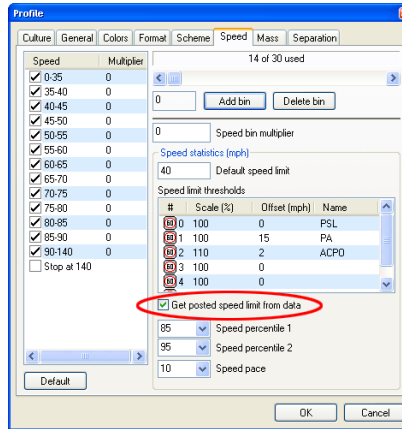


Example report using Separation, in this case defined as Headway

Speed Analysis

Automatic Speed Limit

There is a new option in the Speed page of the Advanced Profile settings - **Get Speed Limit from data**.



Setting the Automatic Speed Limit option.

If this option is checked, MCRReport will look in the site **Description** field for a speed limit in the following form:

- Must be enclosed in angle brackets < >
- Default is km/h. Append an 'm' or 'M' for mph.
- The speed limit can appear anywhere in the description, but other angle brackets cannot be inserted when using this feature.

Example Site Descriptions	
km/h	mph
Hay St <60>	<40 mph> Speed test, Euston Road
<60km/h> Hay Street	ACPO test, Harrow Road <40m>
Hay St, <50 km/h> study	Harrow Road, PSL=<40 MPH>

If this feature is enabled, the following will result in the posted speed limit being set to zero:

- MCRReport does not find a valid speed limit in the description.
- Using multiple files with different speed limits in a single report.

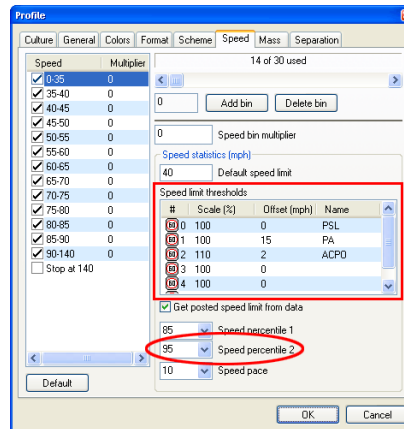


Note: This feature can be applied to your existing data files by editing the site description using the "Transform data file" feature in the File Tree.

Speed Statistics

The speed statistics options in the report Profile have been expanded to include:

- A second percentile.
- 10 extra speed limits.



New speed statistics options

The extra speed limits are based on the Posted Speed Limit (PSL) using the formula $(PSL * \%/100) + \text{Offset}$. Note also that each limit can be named, which will be displayed on reports. Simply double-click a limit to change. Speed limits that are the same as the PSL (ie. 100%) will be suppressed.

Many of the speed related reports now display a common speed statistics summary as shown below.

Vehicles = 125765 Posted speed limit = 80 km/h, Exceeding = 84352 (67.07%), Mean Exceeding = 86.88 km/h **Limit 1 (PSL+10%)** (80 * 110%) + 0 = 88 km/h, Exceeding = 27223 (21.65%) **Maximum** = 174.7 km/h, **Minimum** = 0.0 km/h, **Mean** = 83.2 km/h **85% Speed** = 90.0 km/h, **95% Speed** = 95.8 km/h, **Median** = 82.4 km/h **20 km/h Pace** = 73 - 93, **Number in Pace** = 107015 (85.09%) **Variance** = 60.72, **Standard Deviation** = 7.79 km/h

Mean Exceeding

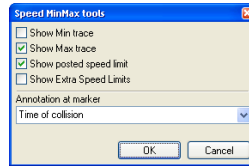
Mean Exceeding is a new calculation in the speed statistics summary. This is the average speed of those vehicles exceeding the posted speed limit.

Mean Exceeding is also an optional field in the Custom List report.

Speed Plot

Tools

The Speed plot includes a number of tools, available in the report's **Properties** menu.



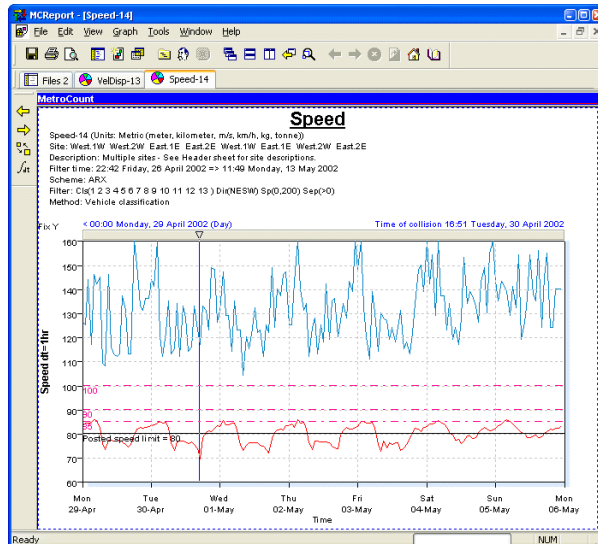
Speed time-based plot options

Show Min / Max trace optionally displays a trace for the minimum and maximum vehicle speed for each integration period. The minimum trace is now off by default.

Show posted speed limit draws a horizontal line at the speed limit set in the report's Profile. This can be set automatically by using the Automatic Speed Limit feature.

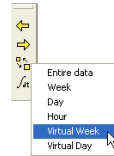
Show Extra Speed Limits draws horizontal lines for each of the user-defined speed thresholds.

Annotation at marker is a string that is displayed next to the time marker date. This is used to highlight a significant event on the report. Holding the **Ctrl** key while moving the marker will give one minute resolution.



Virtual Day / Week Display Span

The Speed plot has additional options in the Display Span menu. **Virtual Day** and **Virtual Week** displays a day or week, averaged over the available data.



Virtual day / week options in the Display Span setting

Speed Bin Multipliers

The weighting value assigned to each speed bin, called the speed bin Factor in MCRreport version 2, is now known as the speed bin Multiplier. The sum of products for all the speed bins in a report is known as the Speed Rating.

MCRreport version 3 also introduces the concept of energy, using the standard formula: $e = \frac{1}{2}mv^2$ where m is the estimated vehicle gross mass from the Advanced Profile mass table. The value is always reported in MegaJoules.

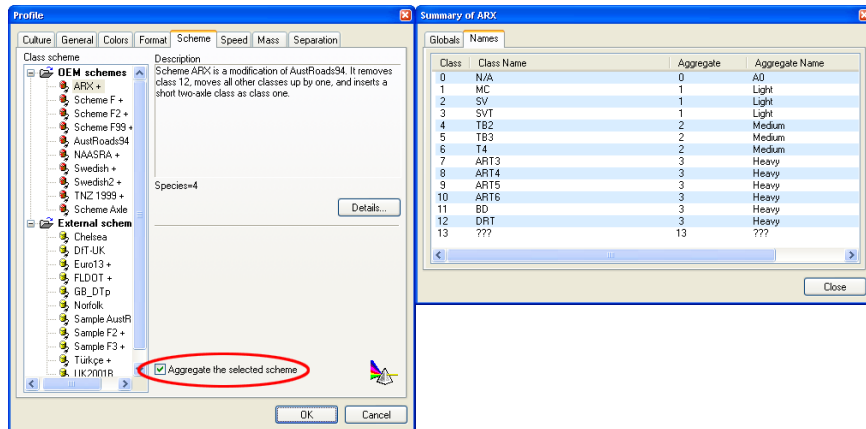
Class Schemes

Class Aggregation

Class Aggregation is the grouping of classes within a classification scheme. For example, many standard schemes define the common aggregates of light, medium and heavy.

In MCRReport version 2, Class Aggregation was known as Superclassing, and was defined in the Profile. Class Aggregates are now defined as part of the classification scheme. For MCRReport's OEM schemes, the grouping is predefined. To make a custom grouping, an external scheme must be used.

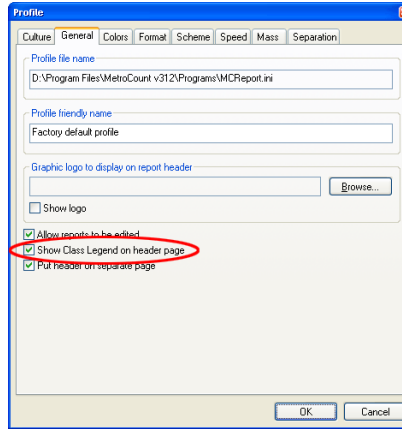
Class Aggregation is enabled in the **Scheme** page of the Advanced Profile settings. Schemes with defined aggregates have a **+** after their name. Aggregate definitions for the selected scheme can be viewed by clicking the **Details** button.



Enabling and reviewing Class Aggregation

Class Legend

The Class Legend is displayed on the report header page, and is a list of the included classes and their respective names. This option can be enabled in the Advanced Profile settings.

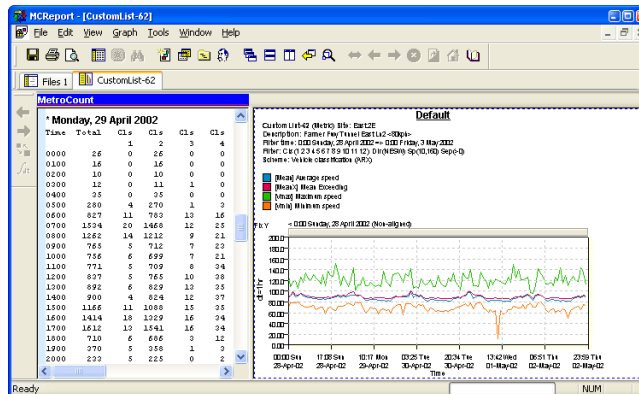


Adding a Class Legend to a report header

Custom List Report

Buddy Chart

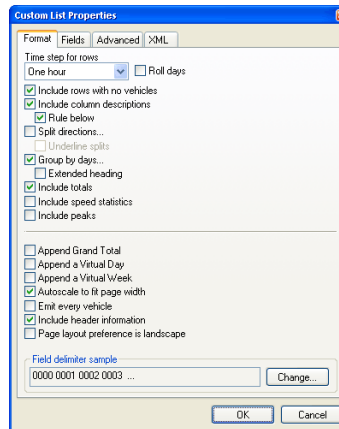
The Custom List report is now a dual-pane report, with a multi-trace chart in the buddy pane. Fields included in the chart are toggled in the Fields Tree.



Custom List report showing new buddy chart

New Formatting Options

The Custom List report in MCRReport version 3 includes some significant new formatting options.



Custom List format options

Time Steps

Time step rows can be excluded from the report by using the **Suppress steps** option. This is ideal for reporting summary and virtual information only.

Roll days

When this option is checked, day headings and summaries are placed every 24 hours, aligned to the first hour of data.

Previous options, such as including only entire days of data, can be selected using the time filter tools in the Profile.

Split Directions

The **Split directions** option includes two rows for each time step - one each for vehicles travelling in the A>B and B<A directions over the sensors. Each row pair can be optionally underlined.

If multiple data files are used in a Custom List report, data is grouped using the internal direction (A>B or B>A), not the cardinal direction.

Totals

The **Include totals** option includes up to six summary rows, with user-defined time periods, summarising the preceding group of time steps. See the **Partial Totals** section for further details.

Speed Statistics

The **Include speed statistics** option includes the standard speed statistics summary (found in other speed reports) where-ever summary rows are included, such as 24 hour periods or virtual data summaries.

Grand Total

The **Append Grand Total** option includes a single row at the end of the report for the entire data range.

Virtual Day/Week

The **Append a Virtual Day** or **Week** options include a virtualised summary of the data at the end of the report.

A virtual day represents the typical 24 hour period, using one hour per row and the same columns. A virtual week represents the typical week, with a row per day and the same columns. Data is accumulated for all the matching times, and then recalculated. The summaries are not just an average of previously calculated rows, totals or averages.

Careful attention should be paid to the start and finish time alignment in the Profile when using virtual summaries. When using the virtual day, the Profile duration should be a whole number of hours. When using the virtual week, the Profile duration should be a whole number of days. If the Profile is not set correctly, you will see **** Virtual Day (Partial days = 7.06)** or **** Virtual Week (Partial weeks = 1.01)** indicating partial data.

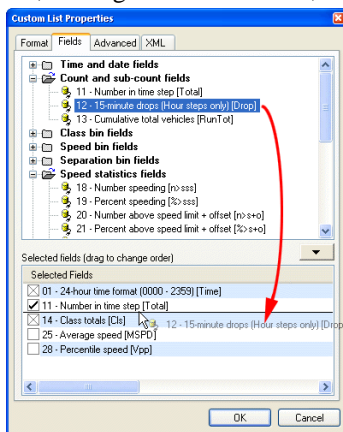
Individual Vehicle Steps

There is a new option in the Custom List report to insert a row for every individual vehicle. Using the **Vehicle Parameter** special group of fields, it is possible to construct a similar report to the Individual Vehicle report. This has the implicit advantages of the Custom List report - choosing which fields, their order, and including field separators to assist exporting. The **Emit every vehicle** option in the **Format** page enables this feature.

If a time step is also selected, and some of the normal fields inserted, a row will be inserted at the appropriate interval, summarising the vehicles in that time step.

Fields Tree

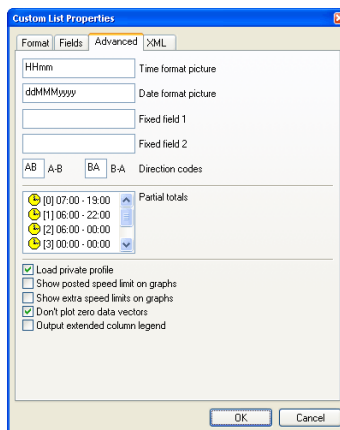
The Custom List report now has around 60 fields to choose from. These are grouped in a tree, and can be dragged into the list of selected fields. Fields can be re-ordered by dragging them up and down in the list. Simply double-click a field, or drag it outside the list, to remove it.



The check box next to each of the selected fields determines whether it will be included in the buddy chart. Some fields, such as times, bins and aggregates cannot be plotted, which is indicated by a cross in the check box.

Advanced Fields

The Custom List report includes a few new user-definable fields.



User-definable fields

Date and Time Format Pictures

A number of new date and time format options are included in the fields tree. If a different format is required, enter them into the Advanced page, using the standard windows notation for defining date formats. There are two matching fields in the **Time and date fields** section of the fields tree.

If these two fields need to be joined together, include a **Remove separator from next field** between them.

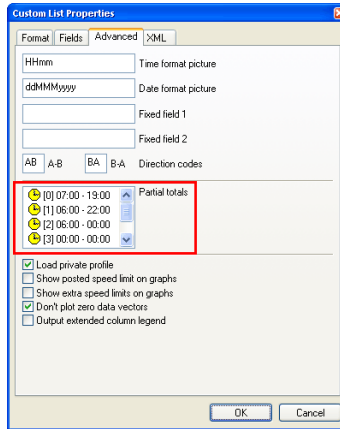
Fixed Fields

Two user-definable text fields are available for including a constant string in each time step. The matching fields in the field tree can be found under **Formatting fields**.

Partial Totals

The Custom List report now includes up to six Partial Total summary time steps. By default, this includes the common 12-hour (0700-1900), 16-hour (0600-2200) and 18-hour (0600-0000) partial totals, and a 24-hour total (0000-0000). Simply double-click to edit.

The Partial Total summary steps are enabled by selecting the **Include totals** option in the **Format** page. If the **Group by days** option is selected, the Partial Totals will appear every 24 hours.

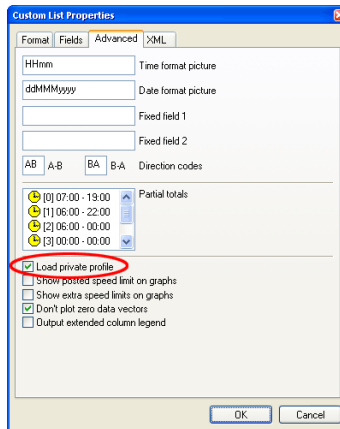


Defining Partial Total time steps

Private Profiles

The Private Profile feature automatically associates a Profile with a Custom List format.

If a Profile file (.ini extension) exists in the Profiles folder with the same filename as a Custom List format file (.xpt extension), this Profile will be automatically loaded, overwriting the report's local Profile.

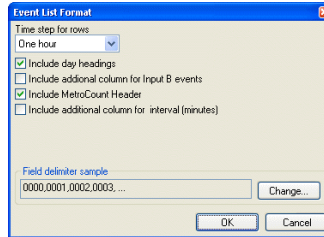


Private Profile option

Event List Report

The Event List report is a new, row-based, customisable report for Event Count data. The report's options include:

- Custom time step, from five minutes to one day.
- Row with day and date at the start of each day.
- Standard MetroCount header.
- Field delimiters to assist exporting of data.

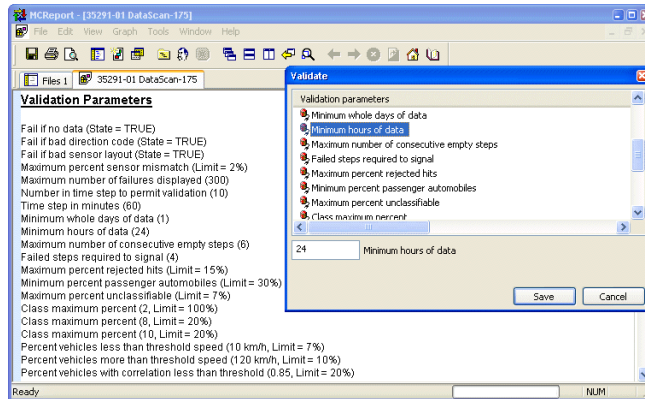


Event List report options

By default, each row includes the date, time and a column for the defined Input Contribution (**A**, **B**, **A+B**, **A-B**). You can optionally include a column for the **B** input to give both lanes in a single report. For data files collected using the separate sensor layout, the Input Contribution should be **A**, and for a split sensor layout, the Input Contribution should be **A-B**.

Data Scan Report

The Data Scan report validates a single data file, based on a set of adjustable rules and boundaries. This report is primarily intended as an automated data check for Scripting.

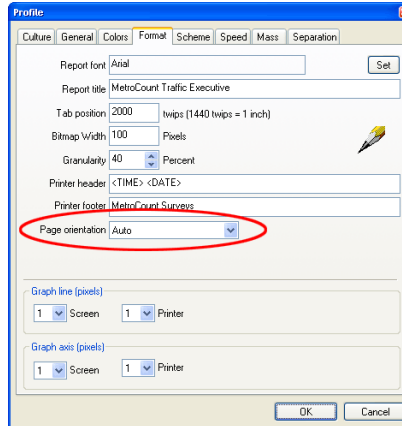


Data Scan validation parameters

General Features

Override Default Page Orientation

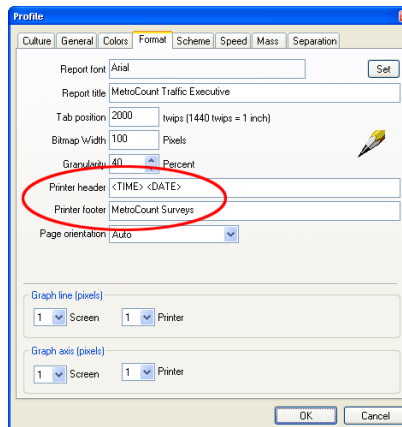
The Format page of the Advanced Profile settings now includes an option to override a report's default page orientation, to force portrait or landscape. Note that the default orientation is usually optimum, and overriding may have unexpected results.



Overriding a report's default page orientation

Report Header / Footer

The **Format** page of the Advanced Profile settings now includes a header and footer setting for adding a single line of text to the top and bottom of each page of a report. The tokens **<DATE>** and **<TIME>** can be used to insert the current date and time. Your operating system's current long date and time format will be used.



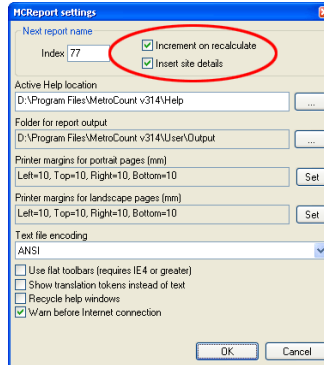
Changing a report's Header/Footer

Automatic Report Name

The **Insert site details** option in MCRReport's global settings prepends the Site Name and Lane Number to the automatic report name template, which is used by default when saving reports.

This gives a name in the form **(SiteName)-(Lane) (ReportType)-(AutoSerial)**.

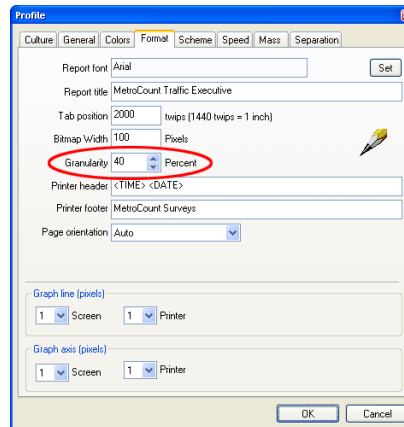
The **Increment on recalculate** option will increment **AutoSerial** each time the report is recalculated, rather than simply when the report is created.



Changing the automatic report name

Density Plot Granularity

There is a Granularity setting in the Format page of the Advanced Profile settings, which relates to density plots. This setting influences the automatic integration time of these reports. A higher percentage gives a smaller integration time, and therefore more resolution. The lowest setting is 40% (default).

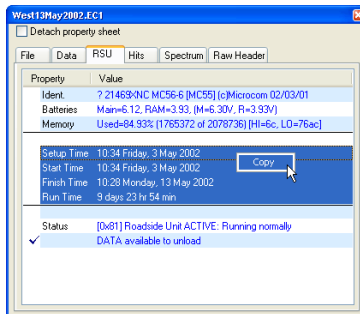


Changing density plot granularity

Copying Dataset Properties

Any text fields in a dataset's properties box can be copied onto the clipboard by selecting them, then right-clicking and selecting **Copy**.

Don't forget the File Tree's **Copy as text** feature for summary header information for a group of files.



Copying Dataset Properties

MCSetup Map File Encoding

MCSetup's Site Lists now support compressed image file formats, not just bitmaps. Any format supported by your version of Internet Explorer, such as JPEGs, can be used.

Windows XP Theme Support

MTE version 3 has built-in support for Windows XP themes.

www.metrocount.com

Copyright© 1991, 2007 Microcom Pty Ltd. All rights reserved. MetroCount, Traffic Executive, MCSetup, MCSetLite, MCRReport, MCTools, Microcom and Microcom Pty Ltd, and the MetroCount and Microcom Pty Ltd logo, are trademarks of Microcom Pty Ltd. All other trademarks are the property of their respective owners. Other Microcom intellectual property including Patents and designs may be protected by international law. The furnishing of this software, the accompanying product or any related documentation or materials does not give you any license to this intellectual property.