ASTEROID

Introduction to ASTEROID
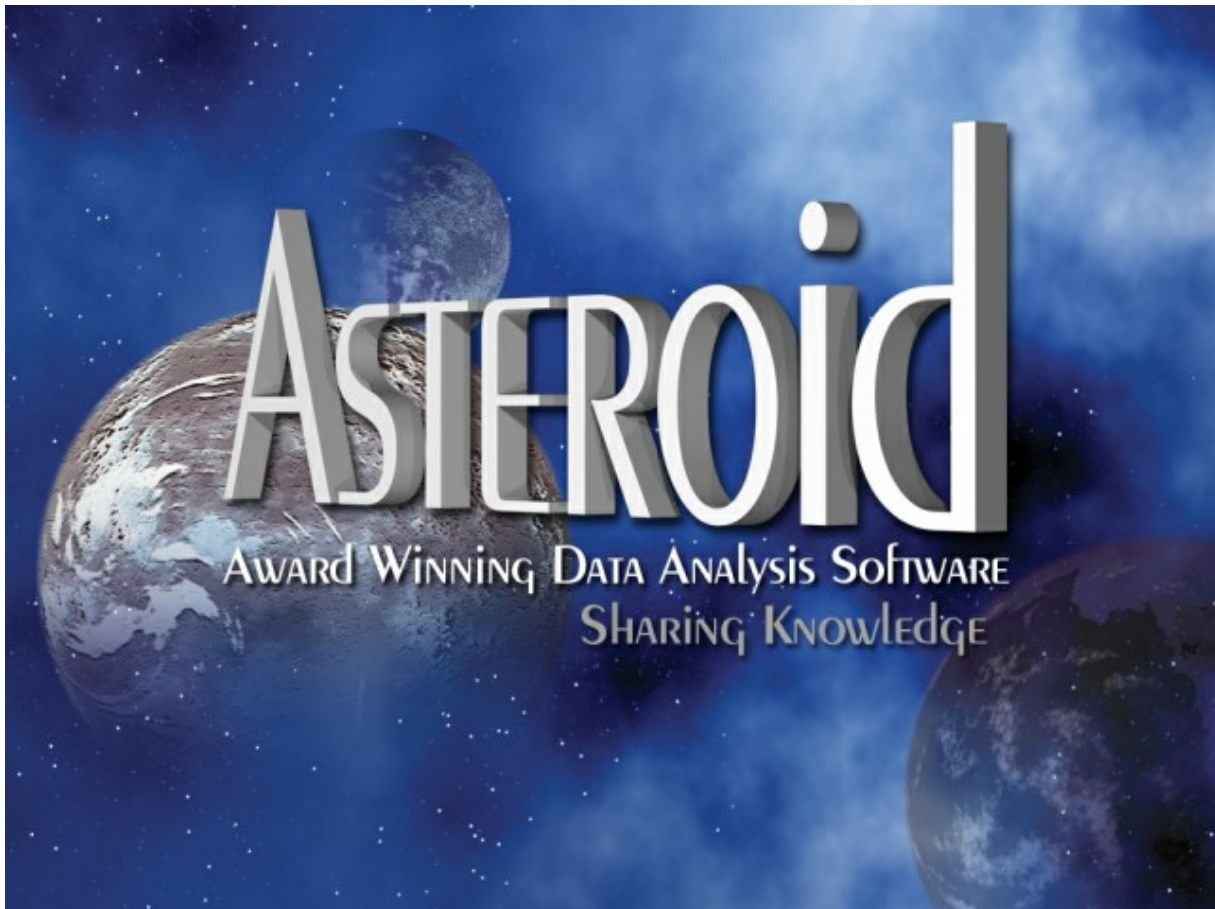
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Introduction

Welcome to ASTEROID. ASTEROID is a software package developed by Roy Morgan Research Ltd to meet your research analysis needs, and the purpose of this training guide is to introduce you to the main functions of ASTEROID.

Course Objectives

At the end of this session you will be able to:

- Confidently analyse data using Tabulation
- Understand the following elements:
  - Rows & Columns
  - Filters & Layers
- Modify the output to show:
  - Just the required figures
  - Preferred formatting (font type, shading etc)
- Create charts within ASTEROID, including:
  - Selecting different chart types
  - Saving the chart for future use
- Manage your tables and charts using Report Folder
- View tables and charts in other applications
- Know how to get HELP.

Implied Knowledge

This guide assumes that you are familiar with:
- Windows Explorer
- Microsoft Excel

ASTEROID Training Series

An Introduction to ASTEROID is the first of four modules in the ASTEROID training series. It is intended both as a step by step guide for new users, and a way current users can refresh, update and expand their skills.

If you are accessing this manual electronically, you will be able to 'jump' to referenced sections via the hyperlink, e.g. Report Folder.

The other modules in the series are:

Target Consumer Profiling
'Profiler' will allow you to easily compare your target Group to other Groups and examine what differentiates each Group from the others. When used with media Variables it also shows cost/reach.

Media Analysis
'MediaPLANNER' creates and compares media schedules, combining print, TV, radio, Cinema and website advertising.

Statistical Analysis
This module covers a range of statistical tools in ASTEROID including:
- A.I.D. (Automatic Interaction Detection) – shows what combination of characteristics best describes the members of a target Group
- Quantities (e.g. dollars spent)
- Significance Testing
- Cluster Analysis

Also Available

Software Reference Manual
The Software Reference Manual forms the online help, available through the ASTEROID Help menu, and provides more detailed information and technical specifications regarding all aspects of the software.

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Getting Started

Start ASTEROID and open a database

Like most software you can launch (open) ASTEROID either from the desktop, by double clicking on the shortcut, or from the Start menu as shown below:
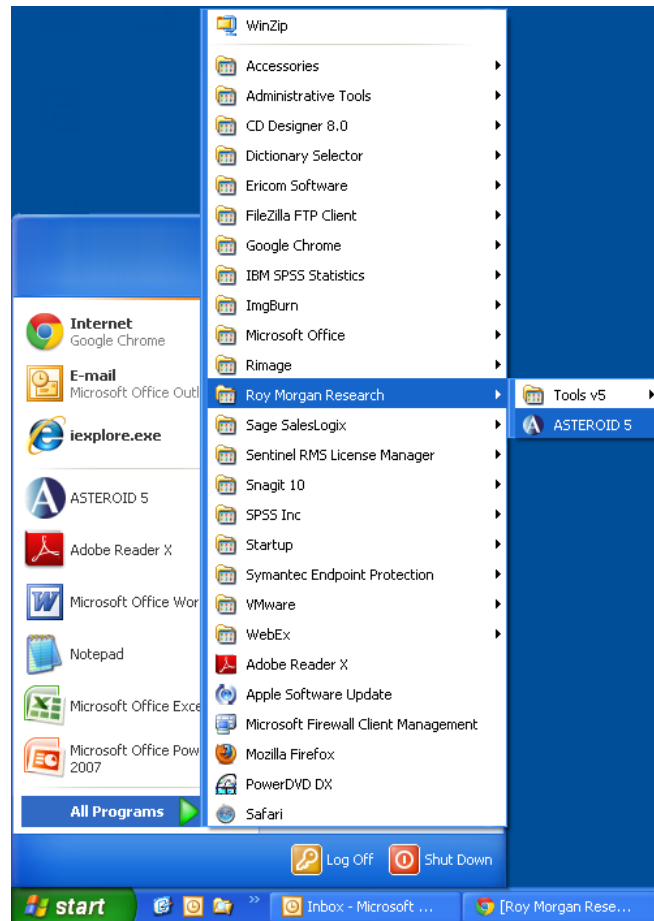
No ASTEROID?

If you don't have ASTEROID installed on your PC then you can either ask your IT department to install it for you, or install the software yourself using the instructions in the Installation Manual provided with your database disk (the installation is an easy process).

If you require any assistance with installing ASTEROID, please contact our Help Desk on +61 3 9223 2428 or by e-mail at asteroid.support@roymorgan.com

Open Database

ASTEROID will normally open with the Open Database window (unless purposely disabled):
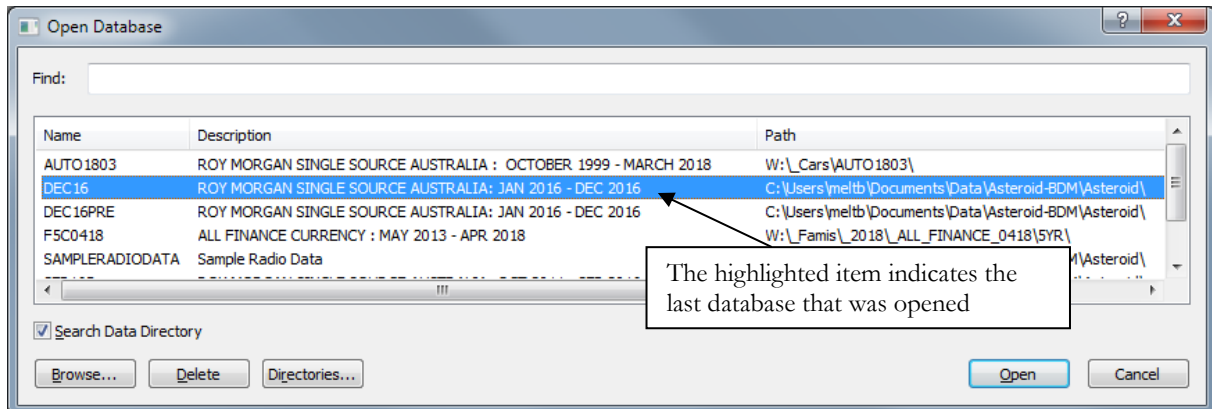
With a long list of database, use the Find feature and start typing to refine the database list to reflect those that contain the word typed – as shown below:
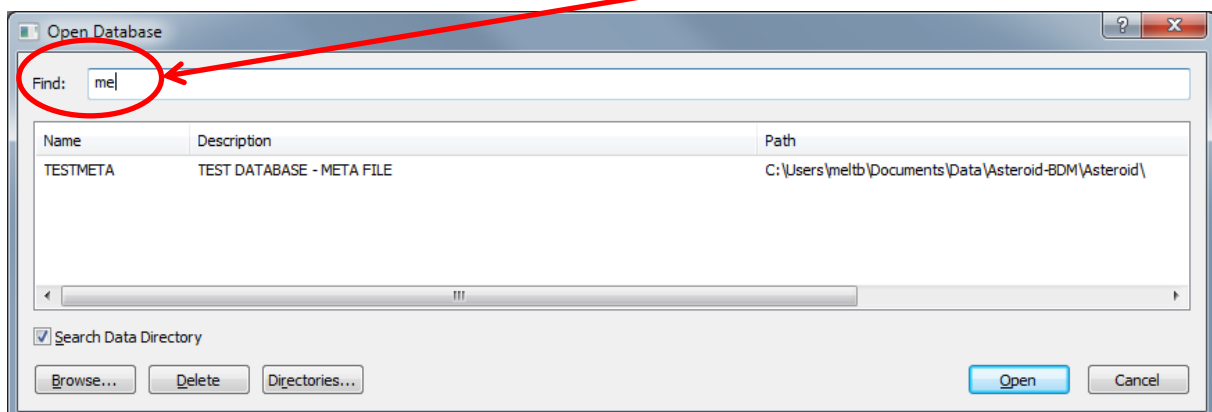
If the Open Database window does not automatically display, click on the ASTEROID Application button in the top left-hand corner of the ASTEROID screen (as shown below) and select 'Open Database' from the menu.
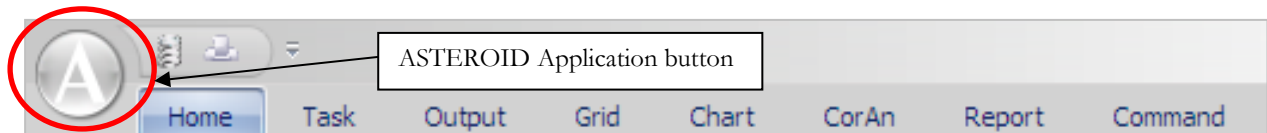
The Open Database window displays a list of previously used databases, or, if the Search Data Directory option is ticked, a list of the databases in the 'Data Directory'. Previously opened databases will also be displayed in the ASTEROID Application menu.

Usually after a fresh installation this window will be blank and you will need to use Browse to select a database.
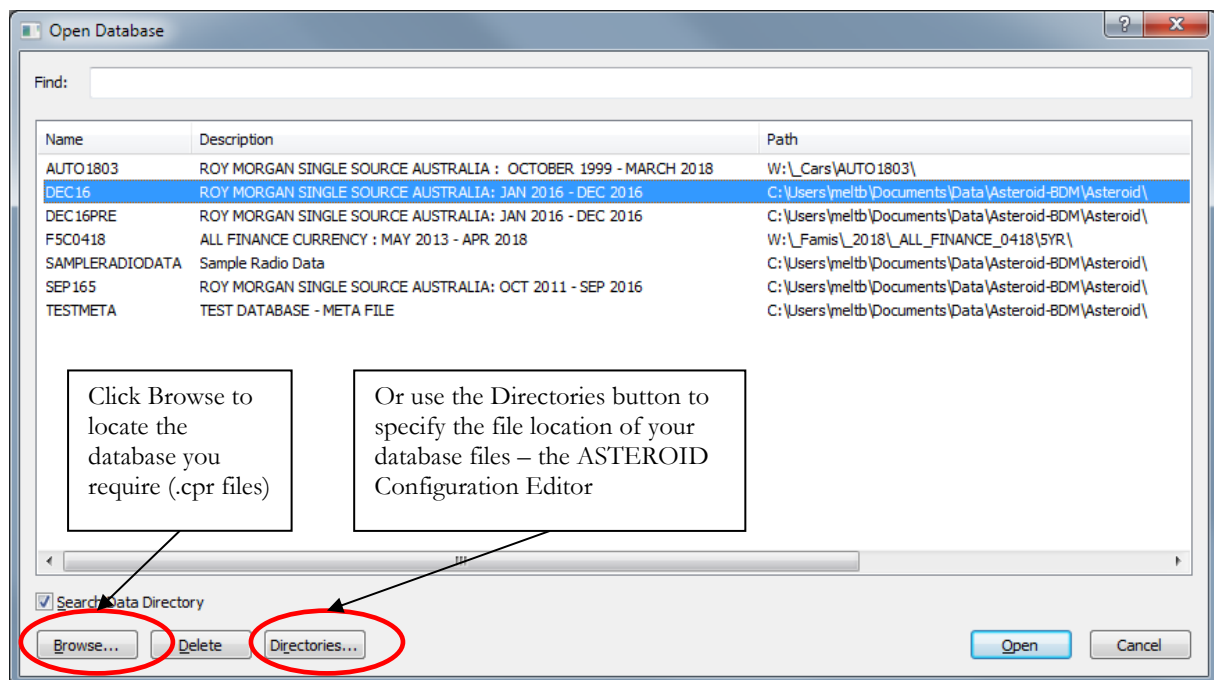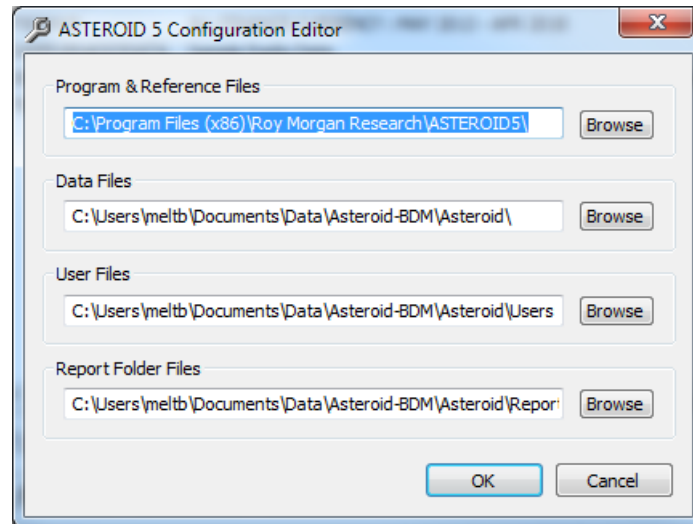
Alternatively, if you have clicked the "Search Data Directory" box, you can use the Directories button to specify the file path for the Data Directory containing the Data Files (databases).

When you have found the required database, either:
- Double click on the database, or
- Select the database and click Open.

If the "Open Last Database at Startup" option has been ticked, ASTEROID will automatically open the last database used, and you won't see this 'Open Database' window. You can either use this database or select a different one via the ASTEROID Application menu.

To clean up the database list – i.e. remove old databases – select the database name and click the Delete button. This deletes the database name from the list only; it does not affect the database.

Note: You will need to open a database immediately after deleting items from the database list, otherwise all changes will be lost.

As the database opens the Welcome screen will appear, prompting you to select a number of options; options include direct access to the task type to be run, as well as actions related to picking up where you may have left off in a previous session.
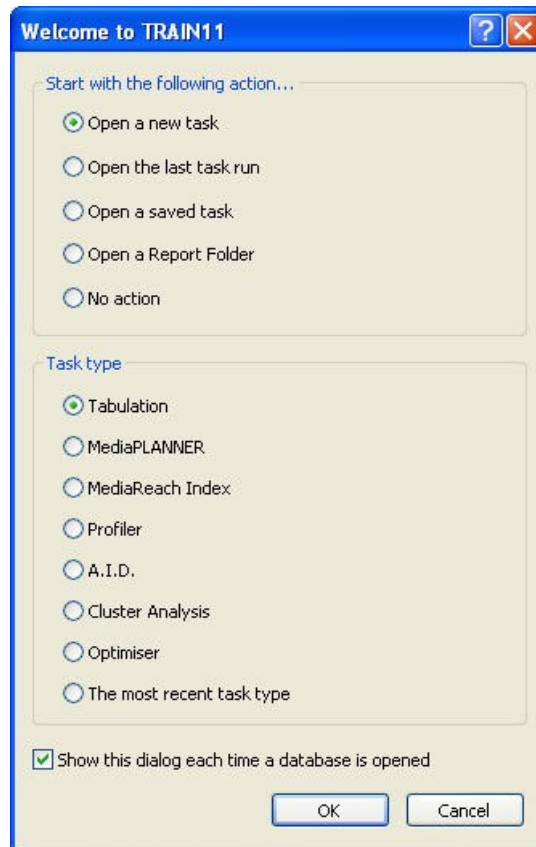
If you prefer to choose nothing from the Welcome window, you can click Cancel and ASTEROID will open as shown on the next page.

Note: you can prevent the Welcome window from opening in the future by un-ticking the tick box in the window itself or by changing the settings (see Global settings on page 124).

If you encounter any problems opening a database, or a specific task, then close ASTEROID and try again. If the problem re-occurs then note any error messages that appear on screen and contact the Help Desk on +61 3 9223 2428 or by e-mail at asteroid.support@roymorgan.com .

ASTEROID Basics

The Screen

With a database open this is what the ASTEROID screen looks like.

Note: There is a blank area if no task session is open. If a task is open, the relevant task panes will be displayed in the Task Area.

ASTEROID Application Button

Quick Access Menu – customise to enable fastest access to frequently used features

Ribbon Tabs – Used to access primary tool buttons and functions

Fluent UI Ribbon

Help (F1)
Display help for current task or command

Data Dictionary pane

Task Area

Use the tabs to access the Find tool or to view lists of specific types of data
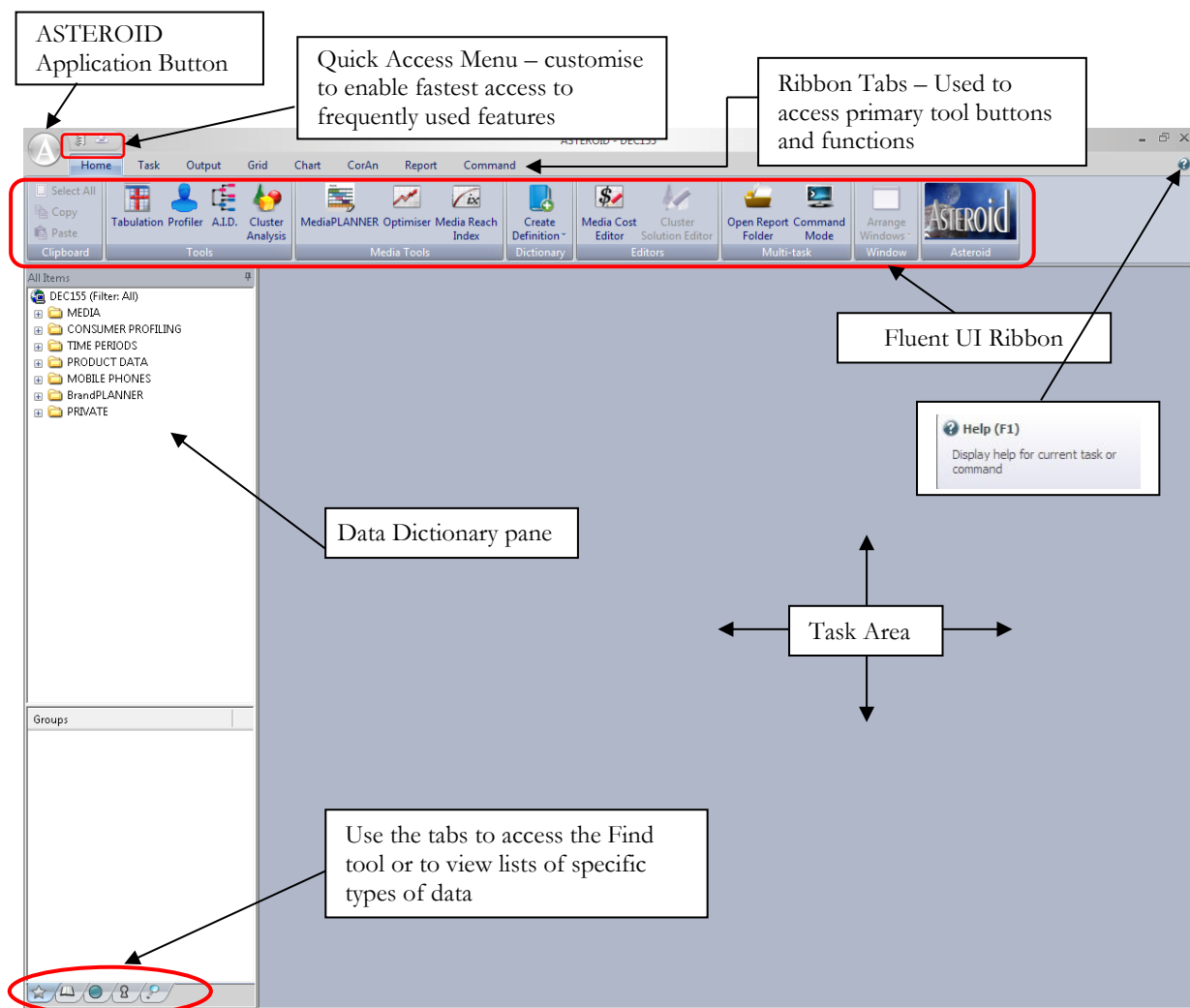
Key Features to note include:

- The ASTEROID Application Button opens the ASTEROID Application menu. Use this menu to select a database, alter your Global Settings, access Help Files and perform many other tasks.
- The Quick Access menu will allow you to customise settings to enable fast selection of most frequently used tools and functions.
- The Ribbon Tabs across the top of the task area will give you access to all the main tools and functions of ASTEROID.
- The Home tab provides 'starting point' access to commonly used tools and functions.
- The Data Dictionary pane allows you to easily view and select data items in the current database. (See Terminology and Creating Tables on page 20.)
- Tabs at the bottom of the Data Dictionary pane take you to specific types of data (e.g. print media data or quantities, if your database has these included).

ASTEROID uses the Fluent UI Ribbon interface to navigate the functions and features. All features are easily accessed through the tabs and controls displayed on the Ribbon.

By selecting any task-orientated tab you will be able to quickly see the available options. To view the content of any button on the tab, place your cursor over the icon to highlight the tooltip.

Note: Some tabs are only active when a particular operation is being performed, or a specific database is in use.

Right-mouse click menus

A feature of ASTEROID is the use of right-mouse click menus to provide easy access to tools and functions. Right-mouse click menus are available throughout ASTEROID and are available for most tools and functions. The content of the menu will vary according to which part of the screen you right click over, and will list relevant tools (e.g. tools relevant to selecting items from the Data Dictionary).

Microsoft Hotkeys within the Output

ASTEROID makes use of several Microsoft Hot-Keys, namely:
Ctrl-C – copy / Ctrl-V – paste / Ctrl-X – cut / Ctrl-Z – undo
Ctrl-F – to find / Ctrl-A – select all / Ctrl-P – print

Shortcut keys (or hot keys) using the menus

Using the ALT key while in any ASTEROID screen will display the shortcut keys for each of the tabs or first level functions available for that screen. To display the next level or button shortcut keys ALT plus the corresponding key must be used. For example, while on the Home tab, using the ALT key alone will display the shortcut keys for all other tabs (see Image 1 below); ALT + H will display shortcut keys for all buttons on the Home tab (see Image 2).

To use a shortcut, simply press the ALT key plus the key corresponding to the appropriate tab, and then type the hotkey letters for whichever function you want to action. For example, to open a new Profiler task, press ALT+H, then type the letter P followed by the letter R.

Image 1: Using ALT key alone displays tab hotkeys – use ALT + corresponding key to open the relevant tab/task.

Image 2: Using ALT + **H** shortcut keys displays all hotkeys for **H**ome ribbon tab
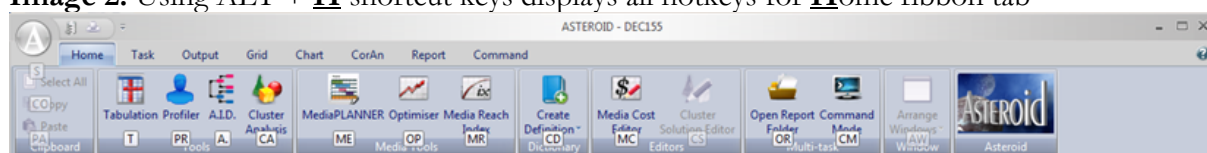
Launching a Task

Unless already set as a default in the Welcome screen, a task will be launched when an ASTEROID tool or operation is chosen. The main ASTEROID tools and operations are found on the Home tab. Click on a button from the Tools group, e.g. Tabulation, to launch a new task.
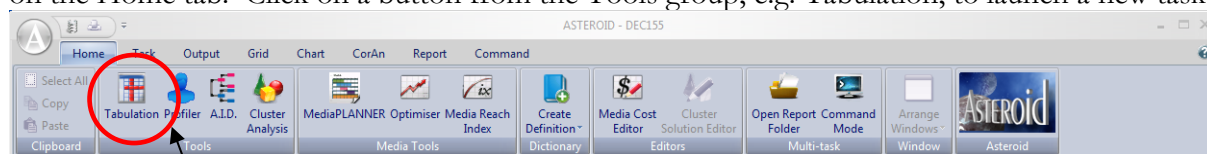
The Tabulation tool is used to launch the standard cross-tabulation analysis that features in this training manual.

You can also initiate tasks by opening the Application menu found at the top left corner of the ASTEROID screen and selecting an ASTEROID task. Click on the ASTEROID Application button to display the ASTEROID Application menu.

The menu also provides a quick overview of all primary ASTEROID tools and commands; including Opening/Closing a Database – with the fast additional option of selecting from the last 19 databases recently opened; opening the Report Folder; commencing or modifying an ASTEROID task, closing an individual task or all currently open tasks, as well as print and Help options and saving work. Selecting Options will invoke the Options menu, as on next page.

Various default settings for ASTEROID are available on this screen, including Directory settings, Settings (Global) and Settings (Numeric).
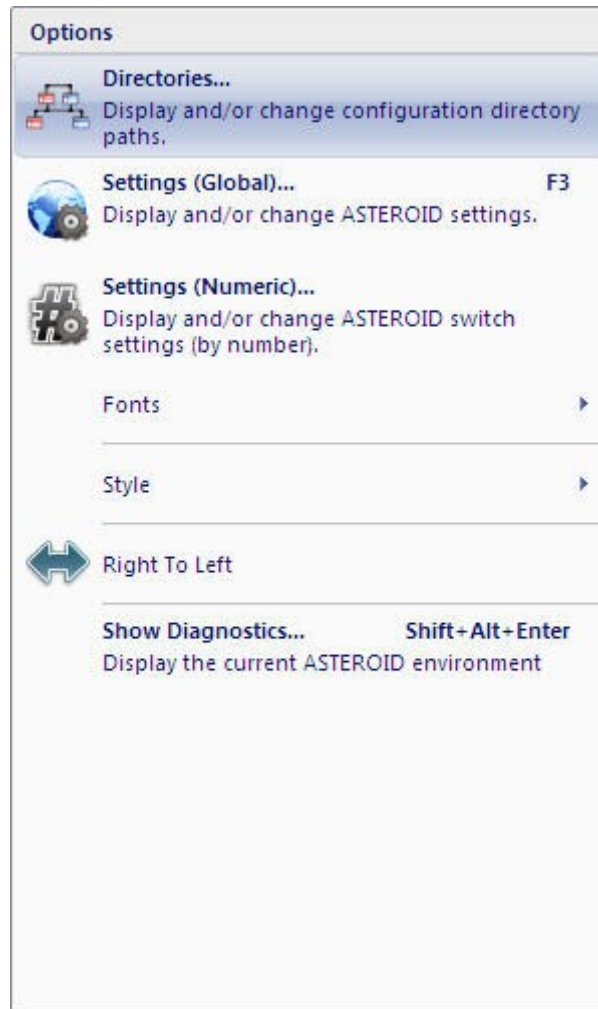
Task Area

An ASTEROID session will commence with the display of the Task area. The area which encompasses Rows, Columns, Filter, Layers and Quantity (see the Task area image below) is known as the Selection pane, and is part of the Task Area. This is where you will specify what you want to see on your tables.

Task Tabs for different tasks

Close an Open task, or use arrows to scroll between tasks

Output View Selection Tabs used to change view

Selection tab – opens the Data Selection pane which is used to create or edit what you want in the task output. You can return to the Selection pane at any time to change a task
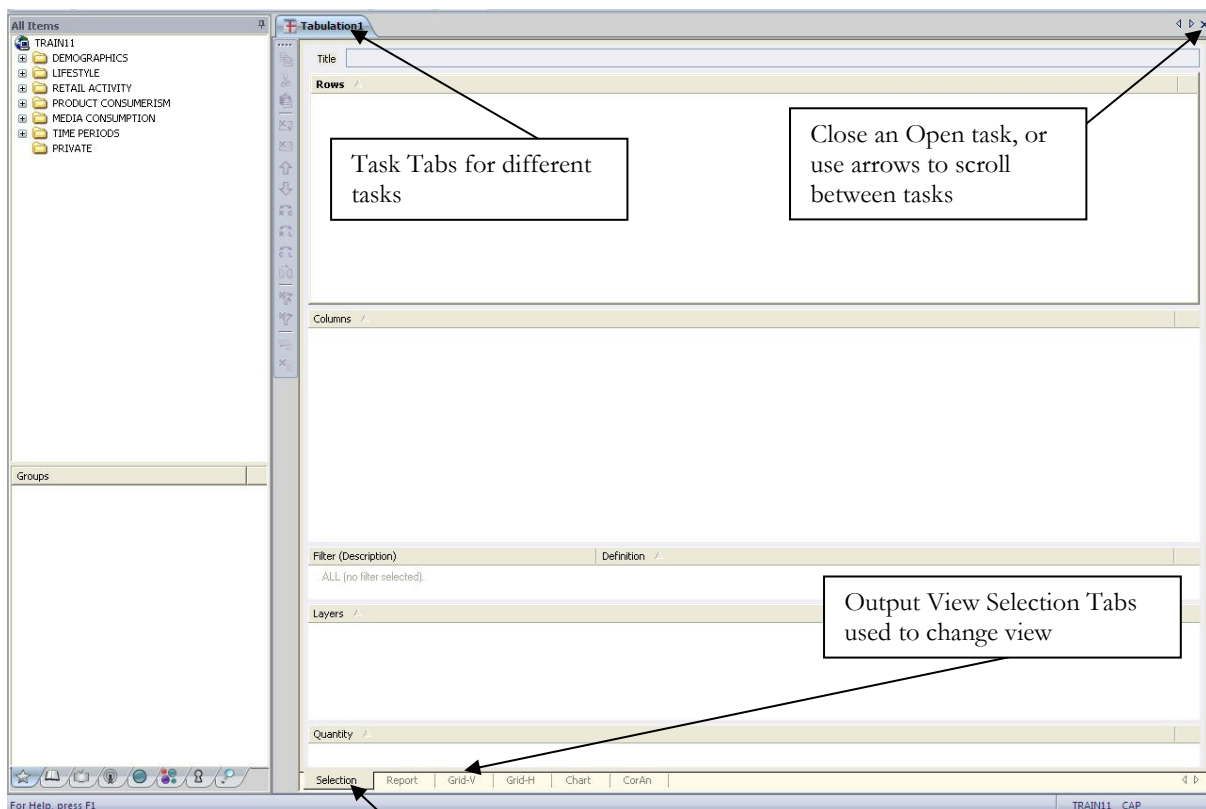
The Selection Pane

Activating a Task will display the Selection pane.
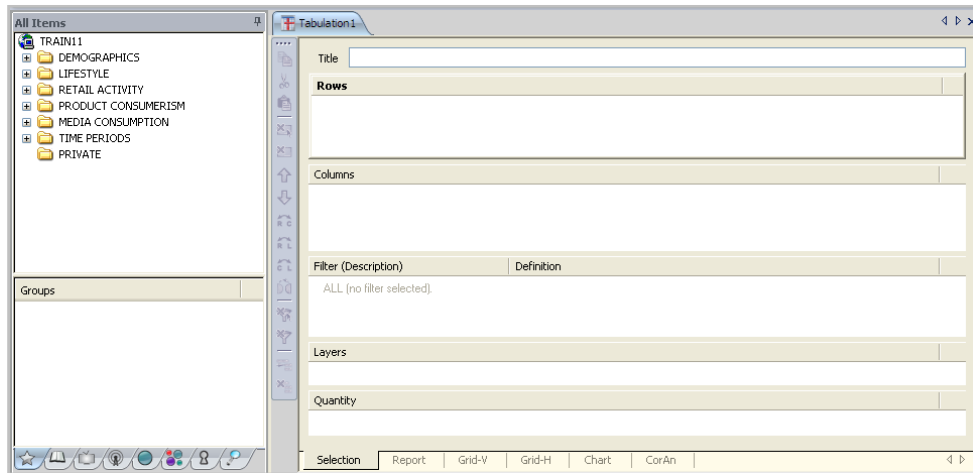
The Selection pane is divided up into sections and the number and type present will vary according to the task type. A bold heading indicates the currently active section, e.g. Rows. Any section can be expanded to the full depth of the screen by clicking anywhere within the section to activate it and then clicking once on the header, as shown in this 'Rows' example below. Clicking on the heading again returns the section to its usual size.
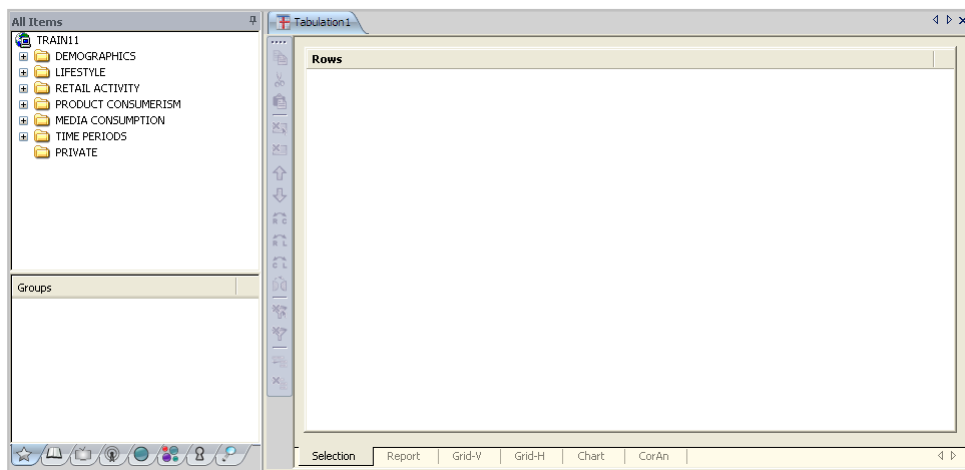
To return to the Selection pane at any time throughout the current ASTEROID session click on the Selection button located on either the Output ribbon tab, or the Selection tab at the bottom of the task.

Task tab – Running a Task

Individual Tasks are executed or 'run' by clicking the Run button on the Task tab. The keyboard shortcut is F9, or you can click a tab on the Output View Selection control found at the bottom of the task area.
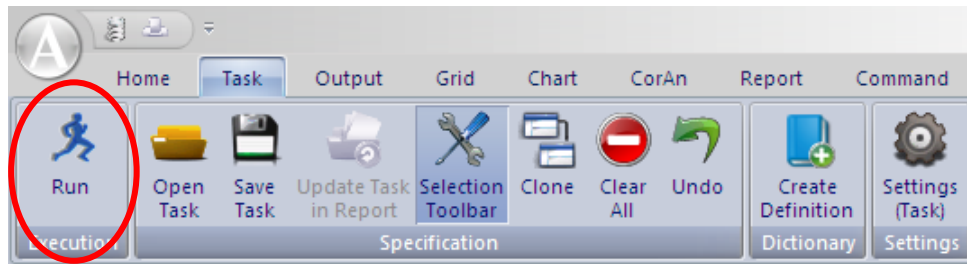
The Task tab controls a variety of task related functions:

Run:	Run the task. (The task could be a Tabulation, Profile, A.I.D. etc).
Open Task:	Open a saved table/profile etc.
Save Task:	Save a table/profile etc.
Update Report:	Update the Linked task in the Report Folder (see Report Folder on page 109).
Selection Toolbar:	Show/hide the selection toolbar.
	By default this is displayed between the Data Dictionary and the Selection pane, however you can click and drag it to other areas of the ASTEROID screen, as preferred.
Clone:	Create an identical new task by copying the current task.
Clear All:	Remove all data selections.
Undo:	Undo the last action.
Create Definition:	Create items in the Private Dictionary.
Settings (Task):	Allows you to change various settings for that task only (see Task settings on page 124).

The Selection Toolbar button displays a range of functions used to manage and arrange the selection of data within the Task area. The toolbar is displayed by toggling this switch. Right-mouse clicking in the selection pane will also provide access to the same functions.

Multiple tasks

ASTEROID allows you to have multiple tasks open at one time. For example you may have a number of Tabulations and other tasks (e.g. Profiler, AID or Cluster Analysis tasks) open simultaneously and work between them.

By using the tabs at the top of the selection pane you can move between tasks. If there are too many tasks to have all the tabs visible, you can click on the arrows in the top right corner to scroll through all your tasks. To close a task, simply click on the **x**.

We will look at the common features of the Task area. The details of how to create tasks in each tool will be covered in the relevant section of this series of manuals.

Each task you create will consist of:

1. The **Selection** pane; where you create or amend a task. This will open automatically when you select an ASTEROID tool, or by clicking the Selection button on the Output tab.
2. The controls to **Run** the task and associated functions found via the Task tab.
3. The **Output View** Selection controls; Report, Chart, or Correspondence Analysis (CorAn), are found on the Output tab, with Grid on a separate tab, and these can also be accessed via the Output View Selection tabs at the bottom of the screen.
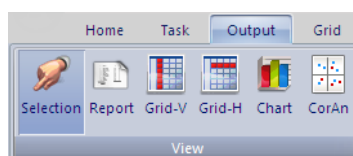
The Output View

Each Task will generate an outcome, or 'output view', e.g. a Grid-V table, which is displayed within the Task area. ASTEROID provides a number of view options, from tables to charts, as well as higher level analysis such as Correspondence Analysis and Cluster Analysis.

Depending on the type of task run, output may also be in the form of data files saved in the user directory, such as a .csv or .lis file, etc., if requested.

To change the view, click on a different view option from the Output tab displayed across the top of the screen, or by selecting from the Output View Selection tabs found at the bottom of the task.

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Creating Tables and Reading Data

Tabulation

We use the Tabulation tool to create tables (or 'cross-tabulations') which will display elements of data in rows and columns. Where these rows and columns intersect, this will help us understand the relationship between the two elements of data.

Typically we use it to find out the number of people with one characteristic who also possess another characteristic, for example those in a specific age group who also own a credit card. Below are some other examples of the type of information gained through Tabulation:

- Attitudes to a new product range across different regions.
- The newspaper readership of a particular age group.
- Satisfaction of staff at different levels within a company.

The starting point for understanding the depth of information provided by Tabulation is to look at the output (i.e. the tables) and learn how to read them.

The following table is an example of an output table from Tabulation. In this case it looks at the number of vehicles owned in the household, crossed with age. In addition it has been layered by sex.

Note: The Grid is displayed in the standard Roy Morgan default Grid-V view.

Tabulation1

	A	B	C	D	E	F	G
1	**ASTEROID TRAINING DATABASE FOR 2011**						
2							
3	Filter: All cases						
4	Weights: Projected population of Australia 14+ (in '000)						
5	No ranking						
6	Layer: All cases						
7							
8	"Which of the following activities have you done in the last 3 months ?"						
9				**AGE - summary**			
10			**TOTAL**	**18-24**	**25-34**	**35-49**	**TOTAL 50 and Over**
11							
12	(unweighted)	uc	51570	4755	7181	12488	24726
13	(POPN '000)	wc	18254	2148	3181	4752	7015
14		h%	100%	12%	17%	26%	38%
15							
16	ALL ACTIVITIES IN THE LAST 3 MONTHS						
17							
18	Went to a night club/disco	uc	953	302	246	257	131
19		wc	1643	789	484	263	80
20		v%	9.0%	36.7%	15.2%	5.5%	1.1%
21		h%	100%	48%	29%	16%	5%
22		tot%	9%	4%	3%	1%	0%
23		ix	100	408	169	61	13
24							
25	Went to a casino	uc	1267	143	148	294	679
26		wc	1436	379	297	319	439
27		v%	7.9%	17.7%	9.3%	6.7%	6.3%
28		h%	100%	26%	21%	22%	31%
29		tot%	8%	2%	2%	2%	2%
30		ix	100	224	119	85	79
31							
32	Wen	c	642	51	72	186	321
33		vc	739	125	148	226	205
34		%	4.1%	5.8%	4.6%	4.8%	2.9%
35		%	100%	17%	20%	31%	28%
36		ot%	4%	1%	1%	1%	1%
37			100	144	115	118	72
38							

All cases / Men / Women /

Selection | Report | **Grid-V** | Grid-H | Cha

Annotations:

- The database title
- What the table is filtered to (i.e. what filter is applied)
- The data has been weighted
- Is the table ranked?
- The current layer being displayed
- The actual question asked
- For each row you can choose to have any or all of these figures displayed – See Settings on page 124 for information
- This table has multiple layers applied. Click on layer tabs to display a different layer.
- This table has 4 columns in addition to the Total column

Terminology and Creating Tables

Classes

All the data contained in your database is available from the Data Dictionary in the panel at the left of the screen. The visible folders divide the database into **Classes** covering related topics. In the database shown here there are seven Classes covering a range of information:
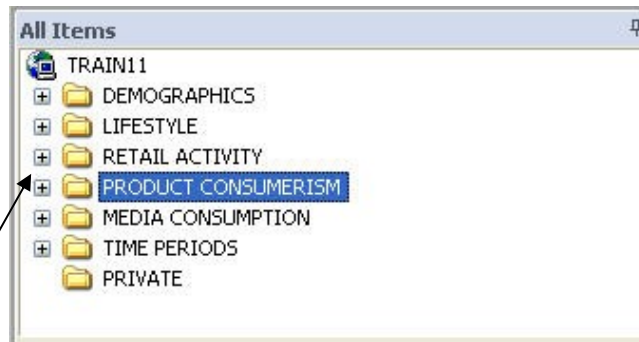
Click on the **+** to expand a folder (Class) and click on the minus to close it again.

The folders expand through further levels until you get to the Variables. These are easy to recognise because they cannot be expanded. The number of levels between the first folder and the Variables depends on how the database is structured.

This is an example of content (Classes and Variables) within the training database:

These are the variables that make up the Mobile Phones Class
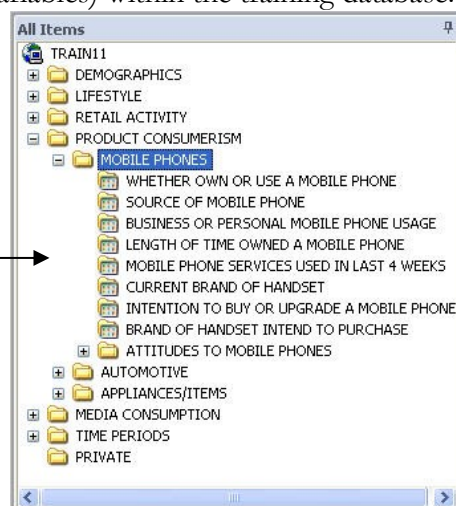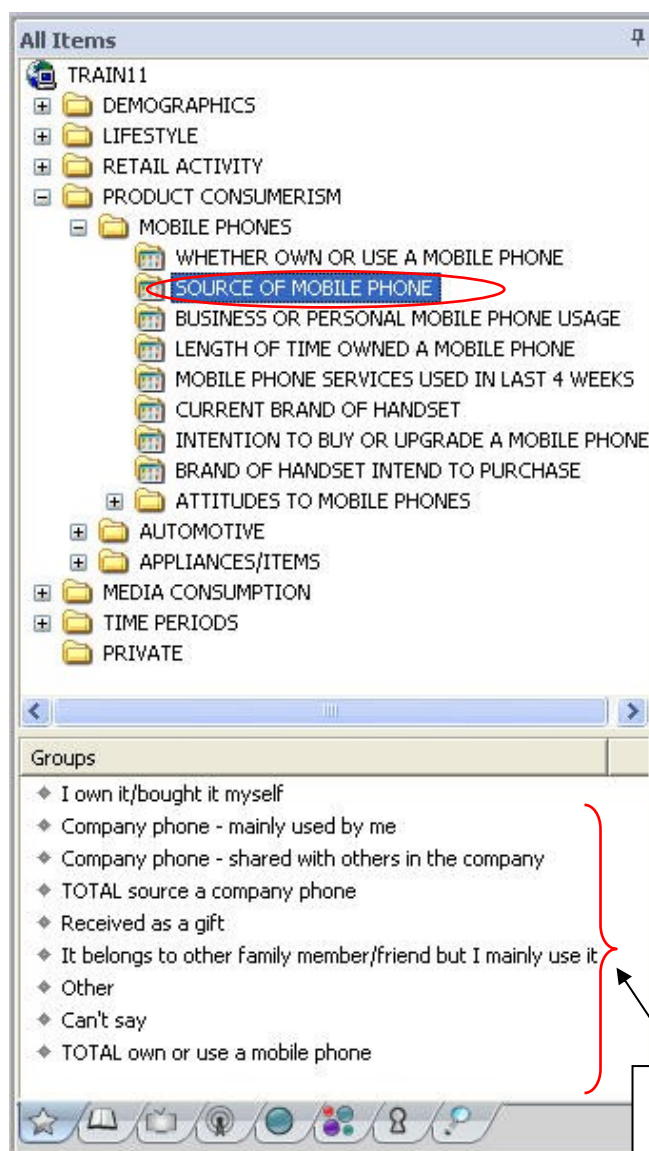
Variables

A **Variable** is a characteristic of the population which varies from person to person (e.g. age is a characteristic of all people but it varies from person to person). It is the question asked of the respondents, such as 'What age are you?' or 'What is the source of your mobile phone?'.

Groups

When you click on a Variable, the **Groups** which make up that Variable appear in the Groups area below (e.g. the **Source of Mobile Phone** Variable has Groups; I own it/bought it myself, Company phone – mainly used by me, etc.). The Groups are the answer sets to the questions asked (Variable).

Entities

Any entities included in the database will appear at the same level of the hierarchy as the variables and are represented by the star icon such as shown above for 'All respondents'.

These are the Groups that make up the Variable 'Source of Mobile Phone'

For a complete list of icons contained within the Data Dictionary, please see

Selection Method

There are three methods of selecting Variables, Groups or Entities:

- Click and drag the item to the Rows, Columns or Layers area.
- Right-mouse click on the item and choose from the options in the menu.
- Double click on the item to add the item (e.g. circled in red above) to the active area of the Selection pane (i.e. the active area will have its area name in bold, e.g. Rows).

Additionally, multiple variables can be selected simultaneously using the Shift key to select consecutive items or the CTRL key to select non-consecutive items.

If you want to remove a Variable/Group from the Task Area, either double click on the item, or right-mouse click on it and select Delete Selected or Delete All.

For many of the tasks that you want to do in ASTEROID, there is the option of the menu items on the tabs or using a right-mouse click to display context-sensitive menus. In addition the Selection Toolbar (found on the Task tab) provides a similar set of options.
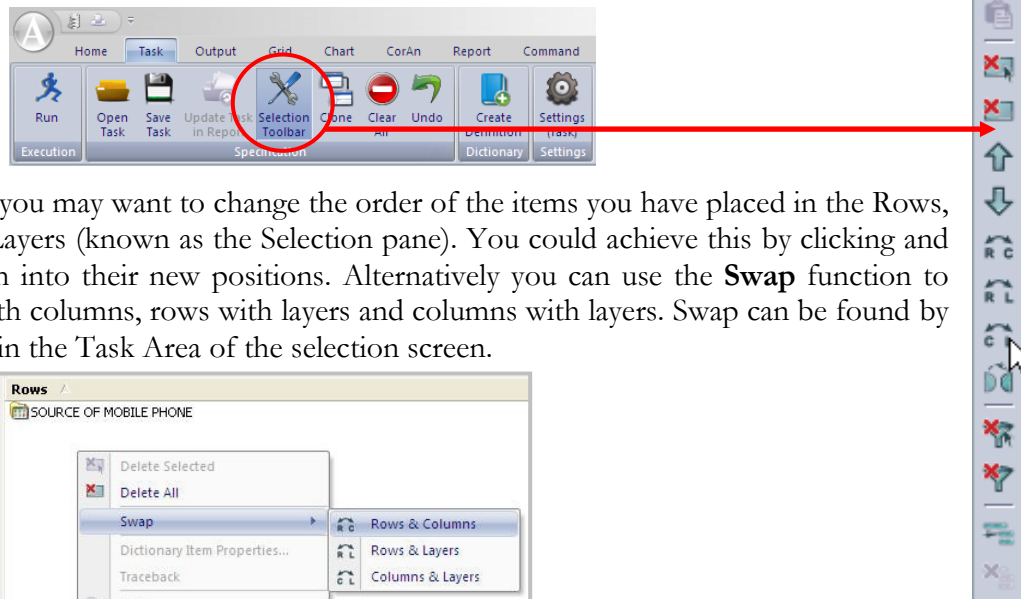
For example, you may want to change the order of the items you have placed in the Rows, Columns or Layers (known as the Selection pane). You could achieve this by clicking and dragging them into their new positions. Alternatively you can use the **Swap** function to swap rows with columns, rows with layers and columns with layers. Swap can be found by right clicking in the Task Area of the selection screen.

The Selection Toolbar

> Hover your mouse over each of the buttons on the selection toolbar to display a tool-tip explaining what that button will do.
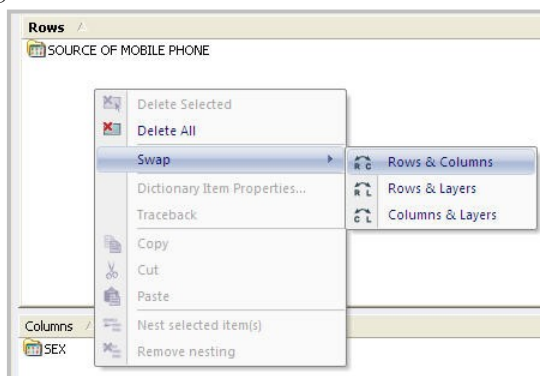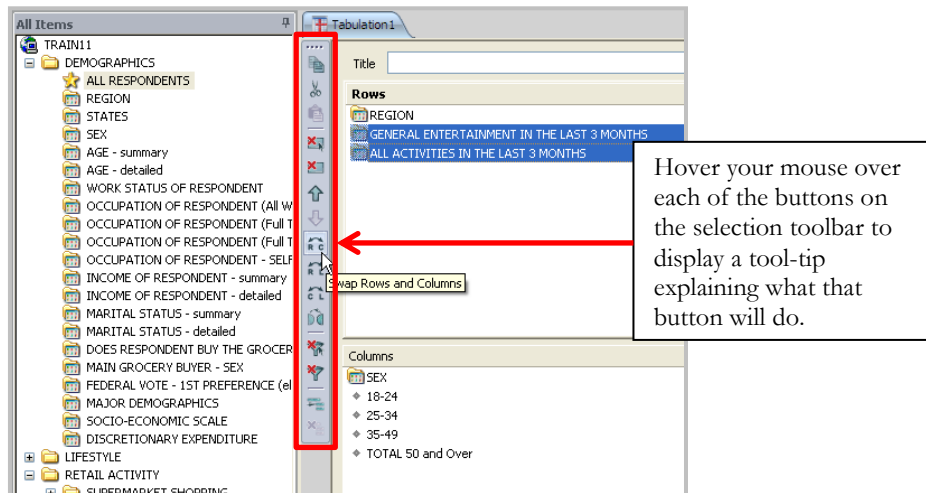
Rearrange the ouput dynamically

You can rearrange the information being analysed without leaving the output screen
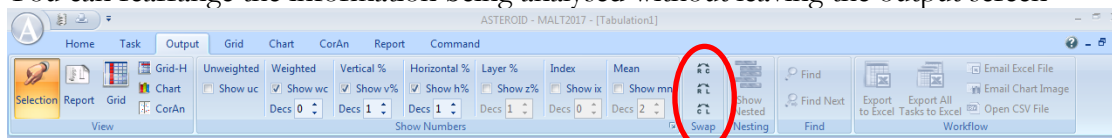
Adding Rows, Columns and Layers

Rows

When you start a new table, the Rows section of the selection window is active – if it isn't then select it by clicking once on the header, or in the blank area below the header.

Use the Data Dictionary on the left of the ASTEROID screen to find the Variable(s) you want in the rows on the table. Using this 'Training' Database for instance, if we wanted to show data on a table for 'appliances owned', we would follow the path:

Product Consumerism→ Appliances/Items
　　　→ Appliances/Items Owned
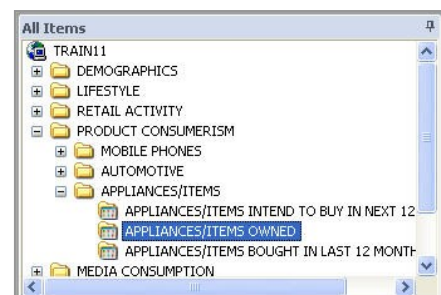
Once we click on the desired Variable, we can choose to either select that whole Variable or to select individual Groups.

In this example we will take the whole Variable by selecting 'Appliances/Items Owned' and dragging it to the Rows area of the selection window:
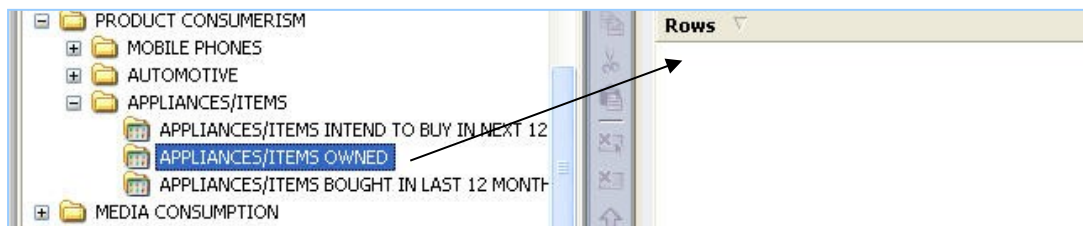
This is the Rows area with the 'Appliances/Items Owned' Variable listed – you can see that the Variable remains in the Data Dictionary on the left:
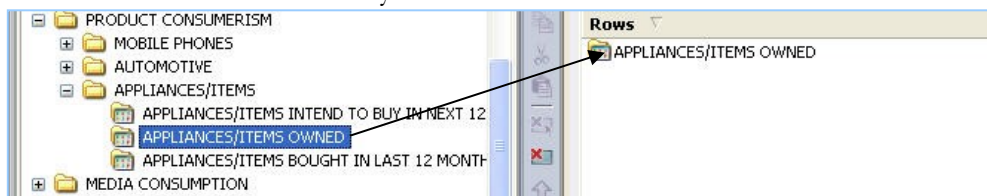
Then, from the **Show Numbers** group found on the Output ribbon tab, we can choose which data types we want displayed in our table.
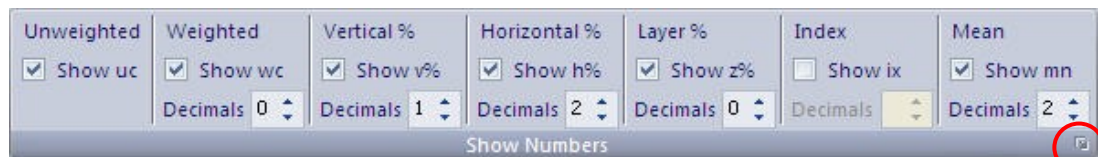
Ticking or un-ticking boxes on the ribbon determines which forms of data are displayed on the Tabulation output and the corresponding number of decimal places. The screen will refresh after each selection. If there are a number of changes to be made to these settings (rather than allowing the system to automatically refresh after each setting is changed), use the small drop-down arrow in the bottom right corner of the Show Numbers group (marked in diagram above) which will invoke the Settings (Task) dialog screen (with the Show Numbers page selected) and allow you to set various options requiring only the one refresh upon closing the screen.

Before column items are added to the table, you can run the table with only a row item – this is the minimum required to run a table, it will not run with a column item only.

To display the table, click the Run Table button on the Task toolbar:

By default the table is normally displayed in the Grid-V view (this is described later in this manual). To change views you can click the relevant button on the Output or Grid tab at the top of the ASTEROID screen (e.g. Chart), or the Output View tab control found at the bottom of the screen. The table will switch to that view.

Columns

Go back to the selection pane by clicking on the Selection button on the Output tab, or alternatively, the selection tab at the bottom of the screen.

Click on the Columns header to activate the columns area of the selection pane and then use the Data Dictionary to find the Variables (or Groups) that you want as the column items. Again you can either double click or drag and drop.

As an example, you may wish to have specific age groups on your table. Find the relevant Age variable and either add the whole variable to the Columns, or add the required age groups from the list of Groups displayed. For example, from a Variable called 'Age Summary' we might want to select all the age groups but not the Totals.
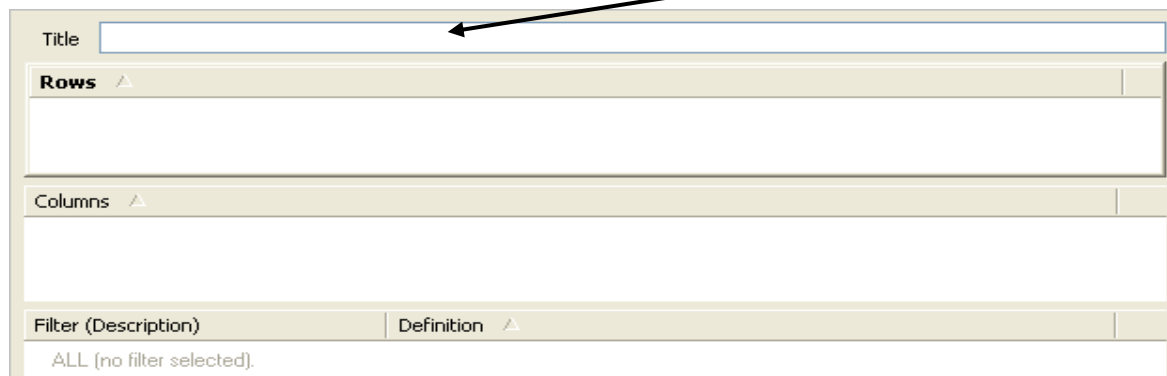
A tip for selecting non-consecutive Groups is to highlight the first Group, hold the Ctrl key down on your keyboard, then click the other required Groups. If you want to drag these selected items to the table, while still holding down the Ctrl key, drag from the highlighted text area and drop into the selection pane.
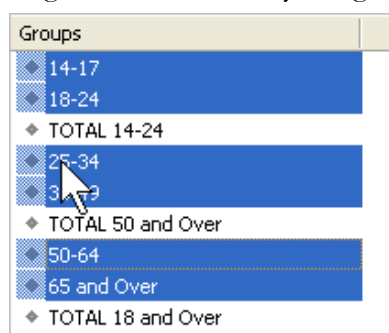
As before, if you wanted to see the processed table so far, you would click **'Run'** from the Task tab. If you then wanted to add further items to the table you would need to again click on the Selection button to return to the Selection pane.

Note: it is often helpful to add a title to your table, which you can do using the Title box at the top of the selection pane:

Title	
Rows △	
Columns △	
Filter (Description)	Definition △
ALL (no filter selected).	

The title will display on the printed table as well as any charts you create.

Layers

It is possible to view Layers of data – see <u>Using Layers in a table</u> on <u>page </u>49 for a full explanation of this feature, including how to read the data on a layered table.

To include layers in your table, you would add a Variable in exactly the same way as you would when selecting items for rows and columns. For the example we have been developing, we would activate the Layer area and then follow the path:

Train11➔Demographics➔Marital Status – Summary

Either double-click or drag and drop this Variable to add it to the Layers area.

This is the completed Selection pane on the Task Area:
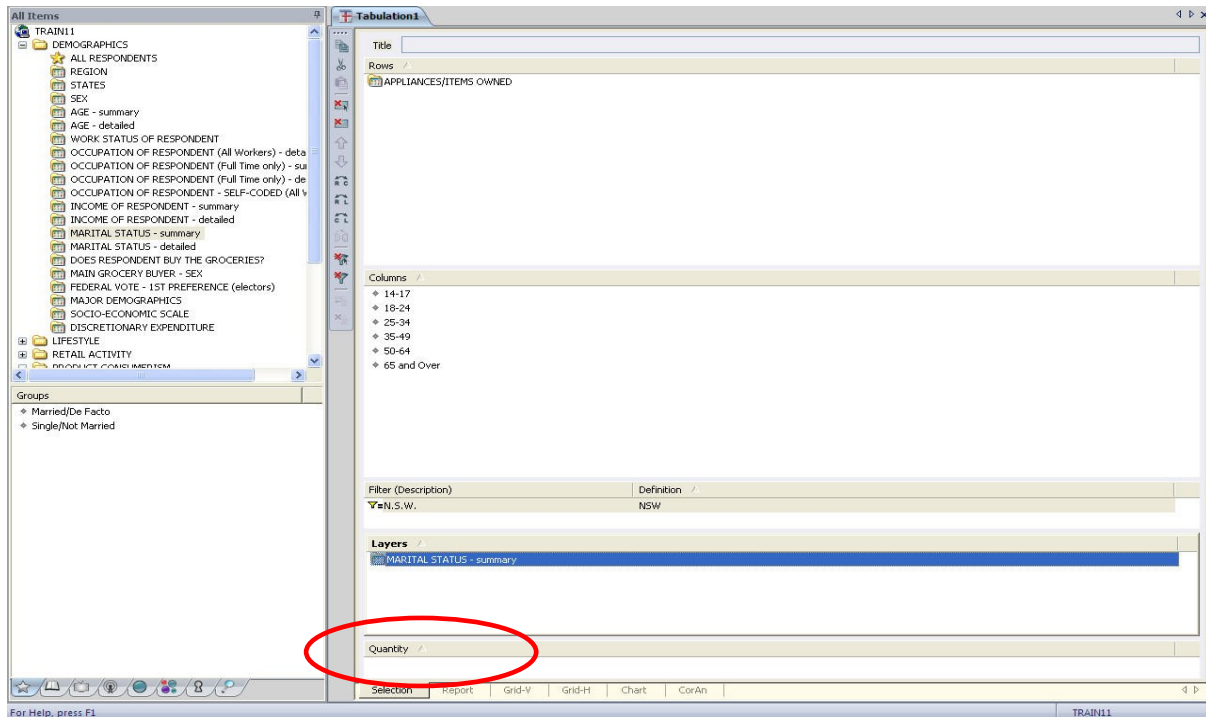
Note: In the completed Task Area of the previous image, we have not added anything into the 'Quantity' area. For information on Quantities, please see the Statistical Analysis Training Series guide.

When we click the Run button located on the Task tab the table will display in the default view 'Grid-V'.

Filters

Filters are used to restrict the table generated to a specific subset of the database, e.g. those living in New South Wales only. Applying a filter differs slightly from adding rows, columns or layers. For our example, we could go to:

Train11➔Demographics➔States

Add the Group 'N.S.W' in the same way as with Rows or Columns, or highlight 'N.S.W' then click the 'And' button in the Filter area.

Note: ASTEROID will automatically give the filter a Description which is the same as the Definition. However, it is a good idea to enter a more meaningful description as this is what will appear on the table. To do this, click into the Description area of the filter and type in the new description here.

Complex/Combined Filters

It is possible to create and apply more complex filters, which combine data from different Groups in targeted ways.

For example, we might want to examine the behaviour of men aged 35-49 who are divorced or separated and who do not live in Western Australia. As noted above, it is helpful to type in a meaningful description for a filter, as shown in the image at the bottom of this page.

In order to create a complex filter definition such as the one above, we need to make use of the Logical Operators "AND", "OR", and "NOT", which can be found on the right-hand side of the Filter pane. Because these operators can cause confusion – especially in the case of "AND" and "OR" – a detailed account of what these operators mean can be found on the next page.

In essence, we use "AND" (&) when we want the data in our filter to fit both sets of criteria (e.g. people who are both Male AND aged 35-49 years old). We use "OR" (+) when we want our data to fit either one of a set of criteria (e.g. Divorced OR Separated), and we use "NOT" (NOT) when we want exclude data that fits a particular criteria (e.g. NOT from Western Australia).

Understanding AND, OR & NOT

AND (&) versus OR (+)

When you use "AND" you will only get people who fit **both** (or **all**, if using more than two) of the specified criteria, but when you use "OR" you will get all people who fit **either** (or **any**, if more than two) criteria.

For example, if we use "AND" (&) for owners of dogs and cats, we will filter to only those people who own at least one dog AND **also** own at least one cat:

People who own dogs. ⟶   ⟵ People who own cats.

We only get people who own both dogs and cats.

People who own both dogs and cats.
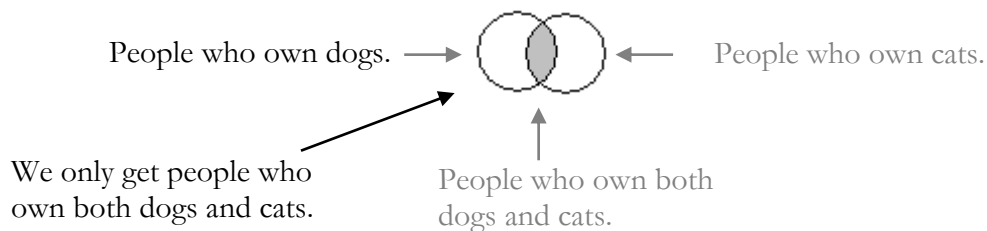
Whereas if we use "OR" (+), we will get all people who own either a dog(s), or a cat(s), or both:

People who own dogs. ⟶   ⟵ People who own cats.

We get <u>all</u> people who own a dog and <u>all</u> people who own a cat.

People who own both cats and dogs.
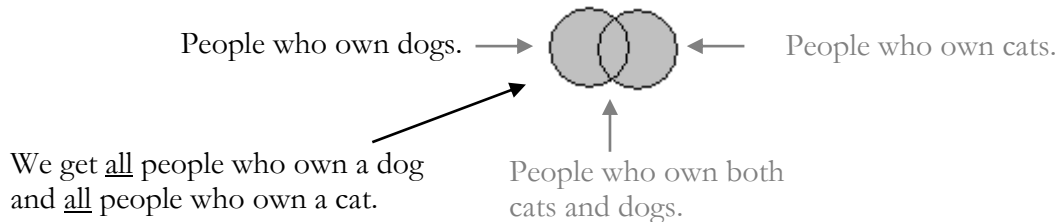
NOT (-)

When you use NOT you get people who fit one criteria exclusively. If we wanted to look at dog owners, but wanted to exclude anyone who might also own a cat(s), we would use "NOT" (NOT):

People who own dogs. ⟶   ⟵ People who own cats.

The shaded section is the Group of people we want.

People who own both cats and dogs.
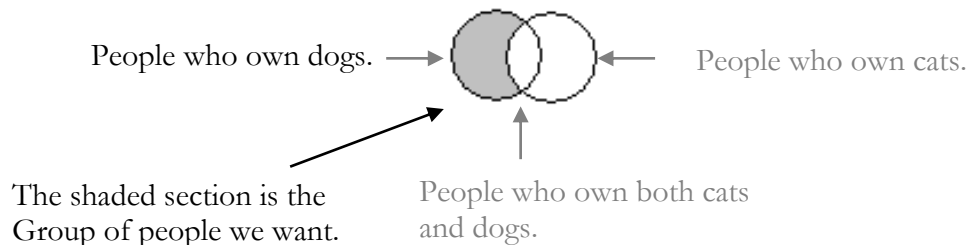
Rough guidelines for using AND. OR and NOT.

- If you use the word 'both' when you say the statement to yourself then use AND.

- If you use the word 'either' or 'or' when you say the statement to yourself then use OR.

- If you use the word 'not' or 'only' when you say the statement to yourself then use NOT.

Note*:* If you use the word 'and' when you say the statement to yourself, to find out if you need AND or OR, try substituting 'either' or 'both' for the 'and' – e.g., do you mean people who own either cats or dogs, or do you mean people who own both cats and dogs?

Creating a Complex/Combined Filter

Initially this type of filter is created in the same way as a single filter - add the first part of the filter to the Filter area by double clicking on the Group or Entity, or by selecting (i.e. highlighting) it in the Data Dictionary and clicking on the "AND" to the right of the filter pane:

Without clicking away from the Filter area, highlight the next item for the combined filter, such as 'Cat', then click whichever Logical Operator is required, i.e. AND, OR or NOT. This will automatically add the new item to the filter:

Notice that the resultant filter will differ depending on the logical operator selected:

AND (&):

OR (+):

NOT (NOT):

Occasionally you may notice that you have created a filter like this, with one item in the

description and yet two in the definition:

Filter (Description)	Definition △
▼=Dog	DOG & CAT

This shows that you clicked back on the filter text before adding the second item.

The Definition column indicates that the combined filter has been created, so you can simply type the appropriate text into the Description (e.g. People who are dog owners and cat owners).

Using these two steps, i.e. continue to highlight items then select a logical operator, you may build a complex filter.

Note: The difficulty in creating combined or complex filters is in ensuring that you are keeping your filter logical. For example, you won't get results if you ask for respondents who are male "AND" female, or for those who live in the North "AND" the South.

Checking the sample size of a filtered definition

You can use the "Check" button to the right of the filter pane to check how many people fit the criteria you have applied in your filter. The unweighted count displayed will indicate the sample size from which your tabulation or other tasks will be generated, while the POPN '000 figure will indicate how many people this sample represents.

Filter (Description)	Definition △		AND
▼=N.S.W.	NSW		OR
			NOT
			Check

ASTEROID

That subset contains:
17881 (unweighted)
6066 (POPN '000)

OK
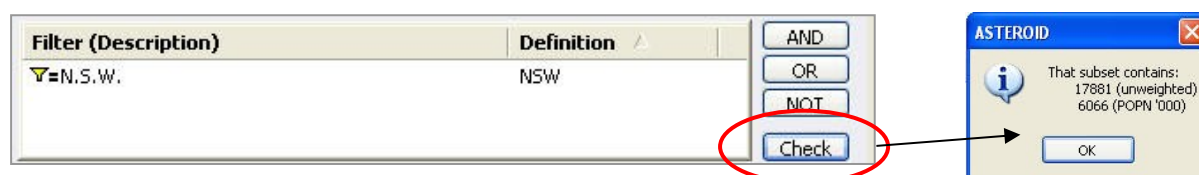
Click OK to close this Check box, and click the 'Run' button to continue processing the selected data.

Viewing the Data
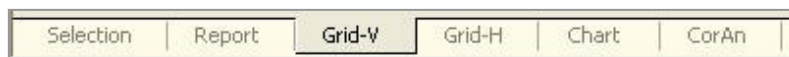
For each table you create in Tabulation there are various ways of viewing the information. The starting point is of course the **Selection** tab which allows you to select the data for your table. Then there are four ways to view data in a table: the **Report** view, either **Grid-V or Grid-H** view, or you can view the data as a chart.

Grid and **Chart** views will be covered in greater detail later in this manual. For more information on how to read the figures in a table, see Reading the Figures (Unfiltered tables) on page 37 and Reading the figures (Filtered tables) on page 47. For more information on Grids see Utilising Grid on page 81. For more information on Charts see Chart on page 87.

There is also a Correspondence Analysis tab, but this is a more advanced feature covered in the Statistical Analysis Training Series guide.

With the addition of Layers we have a second group of tabs along the bottom of the screen, as in this example:
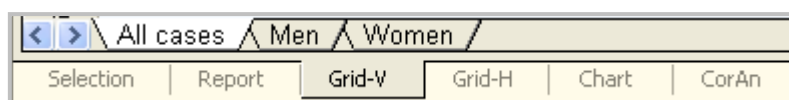
Navigate between the layers by clicking on the corresponding tab, or by using the CTRL+PageUp or CTRL+PageDown keys.

Introduction to ASTEROID

This is how the Tabulation we created looks in **Grid-V** View:

	A	B	C	D	E	F	G	H	I
1	**ASTEROID TRAINING DATABASE FOR 2011**								
2									
3	"Mark the oval next to items your household owns"								
4	Filter: N.S.W.								
5	Weights: Projected population of Australia 14+ (in '000)								
6	No ranking								
7	Layer: All cases								
8									
9						**AGE - summary**			
10			**TOTAL**	**14-17**	**18-24**	**25-34**	**35-49**	**50-64**	**65 and Over**
11									
12	(unweighted)	uc	17593	834	1709	2447	4248	4327	4028
13	(POPN '000)	wc	6229	391	754	1084	1587	1358	1056
14		h%	100%	6%	12%	17%	25%	22%	17%
15									
16	APPLIANCES/ITEMS OWNED								
17									
18	Heater - Gas	uc	1901	44	80	133	439	653	552
19		wc	1853	92	196	255	500	481	329
20		v%	29.8%	23.6%	26.0%	23.6%	31.5%	35.4%	31.1%
21		h%	100%	5%	11%	14%	27%	26%	18%
22		ix	100	79	87	79	106	119	105
23									
24	Heater - Electric	uc	1866	50	84	185	356	579	612
25		wc	1864	111	210	377	393	405	368
26		v%	29.9%	28.3%	27.9%	34.8%	24.8%	29.9%	34.8%
27		h%	100%	6%	11%	20%	21%	22%	20%
28		ix	100	94	93	116	83	100	116
29									

Alternatively, output can be displayed in either **Grid-H** View or **Report** View (see overleaf). It is possible to toggle between the Grid-V, Grid-H or Report view by simply clicking the Output View Selection tab at the bottom of the screen.

Note: The images above and overleaf only show a selection of the rows/columns from the actual table.

Grid View tables are like spreadsheets. By default the grid view displays without any grid lines and that the Total column and row headings have been locked in place using Freeze Labels. See Global settings on page 124 for how to change the display settings.

You may prefer to view the output in a **Grid-H** View, which displays the same data horizontally;

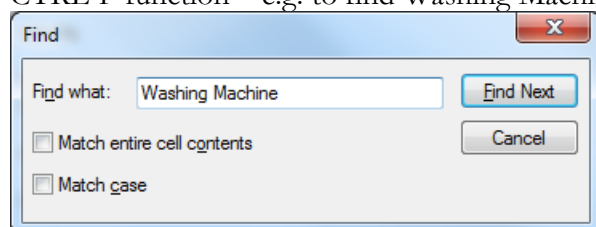|	A	B	C	D	E	F	G	H	I	J	K	L	M
1	**ASTEROID TRAINING DATABASE FOR 2011**												
2													
3	"Mark the oval next to items your household owns"												
4	Filter: N.S.W.												
5	Weights: Projected population of Australia 14+ (in '000)												
6	No ranking												
7	Layer: All cases												
8													
9													
10							TOTAL					14-17	
11													
12	(unweighted)	17593					834					1709	
13	(POPN '000)	6229					391					754	
14	h%	100%					6%					12%	
15													
16		uc	wc	v%	h%	ix	uc	wc	v%	h%	ix	uc	wc
17	APPLIANCES/ITEMS OWNED												
18	Heater - Gas	1901	1853	29.8%	100%	100	44	92	23.6%	5%	79	80	196
19	Heater - Electric	1866	1864	29.9%	100%	100	50	111	28.3%	6%	94	84	210
20	Heater - Other	984	996	16.0%	100%	100	27	55	14.1%	6%	88	36	90
21	TOTAL Heater	3974	3993	64.1%	100%	100	100	212	54.2%	5%	85	176	435
22	TOTAL Air Conditioner	3497	3462	55.6%	100%	100	106	212	54.3%	6%	98	141	364
23	Hot Water Service - Gas	1693	1770	28.4%	100%	100	55	111	28.3%	6%	100	83	218
24	Hot Water Service - Electric	2623	2489	40.0%	100%	100	48	99	25.4%	4%	64	97	236
25	Hot Water Service - Other	845	845	13.6%	100%	100	25	52	13.3%	6%	98	37	97
26	TOTAL Hot Water Service	5013	4954	79.5%	100%	100	124	257	65.6%	5%	83	208	526
27	TOTAL Swimming Pool	727	807	13.0%	100%	100	22	45	11.6%	6%	89	39	103
28	TOTAL Spa Pool	222	290	4.7%	100%	100	7	11	2.7%	4%	59	18	54
29	Barbecue - Electric	133	149	2.4%	100%	100	9	19	4.9%	13%	204	10	26

On the opposite page is the same table displayed in **Report** View. The Report View is a simple, functional view.

The view you choose to use is a matter of personal preference, as the data on the three tables are the same.

Searching Content in the Output Screen

ASTEROID allows you to search for a text string in the Row or Column heading using the CTRL-F function – e.g. to find Washing Machine (as shown below):

Find	
Find what: Washing Machine	Find Next
☐ Match entire cell contents	Cancel
☐ Match case	

Adjustment Flags


```
                    ASTEROID TRAINING DATABASE FOR 2011

Tabulation1 (uc, wc, v%, h%, ix)

    APPLIANCES/ITEMS OWNED
    "Mark the oval next to items your household owns"

    Filter: N.S.W.
    Layer: All cases
                                                          Projected population of A
    (") = Column/row is based on a partial sample.
    (#) = non-standard adjustment - subject to minor variation

                    TOTAL
                                  14-17      18-24    AGE - summary
                                                      25-34      35-49    50-64 65 and Over
        (unweighted)    uc      17593        834       1709       2447     4248    4327     4028
        (POPN '000)     wc       6229        391        754       1084     1587    1358     1056
                        h%        100%         6%        12%        17%      25%     22%      17%
-------------------------------------------------------------------------------------------------
APPLIANCES/ITEMS OWNED

Heater - Gas        uc       1801         44         80        133      439     653      552
                    wc       1863"         92        196        255      500     481      329
                    v%      29.8%       23.6%      26.0%      23.6%    31.5%   35.4%    31.1%
                    h%        100%         5%        11%        14%      27%     26%      18%
                    ix         100         79         87         79      106     119      105

Heater - Electric   uc       1866         50         84        185      356     579      612
                    wc       1864"        111        210        377      393     405      368
                    v%      29.9%       28.3%      27.9%      34.8%    24.8%   29.9%    34.8%
                    h%        100%         6%        11%        20%      21%     22%      20%
                    ix         100         94         93        116       83     100      116
```

Note the Adjustment Flags

You may notice in the Total column in the Report view, the Weighted Count (wc) is followed by **"**. This indicates that the wc figures in the row are based on a partial sample. (This is related to partial time periods. The flags can also be set in a grid based table. For more information on this topic, see Partial Time Periods on page 121).

The single and double apostrophes (to indicate 'partial time periods' and 'partial samples') are known as Adjustment Flags. Report View will display these flags automatically.

If you want them to be displayed in the Grid views, go to Settings (Task) or Settings (Global) and select Grid, then tick the 'Show Adjustment Flags' box, as shown on the right. (For more information see Global settings and Task settings on page 124).

Understanding Tables – who are we looking at?

It is important to know who is included in the data used to create each table. For example a table run from a database that includes people aged 14 years and older is automatically based on 'people aged 14+' but in Tabulation we can also filter a table to a specific sub-set of the total population.

For example, if we were looking at alcohol consumption then we would include only people who are old enough to drink. So if the legal drinking age is 18 years and over, we would filter the table to the age group '18+' (and thus exclude, or filter out, anyone under the age of 18).

On each table you can see if a filter has been applied by looking at 'Filter' in the top left corner of the table. If it is blank or says "All cases" then it means there is no filter applied.

The example at right is the simplest type of table, where only one row item (the variable 'All activities in the last 3 months') has been selected and no columns or filters. You can see that our row 'Went to a night club/disco' is made up of a few different figures (uc, wc, v%, h%, tot% & ix), and that ASTEROID has automatically inserted a column – the Total column.

The Total column represents the population included in the table:

- If there is no Filter applied then the table is based on the total population covered by the database (e.g., Australians 14+).

- If the table is Filtered then the table is based on the number of people who meet the Filter criteria (e.g., Australians 18+).

In the next section we will look at each of the tabulation output figures in detail and compare the figures in the Total column to other columns.

	A	B	C	D	E
1	**ASTEROID TRAINING DATABASE FOR 2011**				
2					
3	Filter: All cases				
4	Weights: Projected population of Australia 14+ (in '000)				
5	No ranking				
6					
7	"Which of the following activities have you done in the last 3 months ?"				
8					
9			**TOTAL**		
10					
11	(unweighted) uc		51570		
12	(POPN '000) wc		18254		
13	h%		100%		
14					
15	ALL ACTIVITIES IN THE LAST 3 MONTHS				
16					
17	Went to a night club/disco	uc	953		
18		wc	1643		
19		v%	9.0%		
20		h%	100%		
21		tot%	9%		
22		ix	100		
23					
24	Went to a casino	uc	1267		
25		wc	1436		
26		v%	7.9%		
27		h%	100%		
28		tot%	8%		
29		ix	100		
30					

Row

Column

Reading the Figures (Unfiltered tables)

In this section we will look at each of the main tabulation output measures (uc, wc, v%, h%, tot% & ix) in some detail, and compare the figures in the Total column to other columns in the table.

Looking at the table below, you can see that we have added columns to the example from the previous page, so that we now have a selection of Groups from the *'AGE – Summary'* Variable in our columns as well as the *'Went to a night club/disco'* in our rows. We will use this example to explore what each of the measures mean and how they should be read.

When reading the figures in the table below, it should be remembered that *'Went to a night club/disco'* is drawn from a Variable covering activities done in the last 3 months, so we should read the row as 'Went to a night club/disco in the last 3 months'.

Likewise, this database covers the population of Australia aged 14 years and over as opposed to all Australians, and this should be borne in mind at all times.

ASTEROID TRAINING DATABASE FOR 2011

Filter: All cases
Weights: Projected population of Australia 14+ (in '000)
No ranking

"Which of the following activities have you done in the last 3 months ?"

The column total measures appear at the top of the table above the row Groups

		TOTAL	14-17	18-24	25-34	35-49	TOTAL 50 and Over
(unweighted)	uc	51570	2420	4755	7181	12488	24726
(POPN '000)	wc	18254	1159	2148	3181	4752	7015
	h%	100.0%	6.4%	11.8%	17.4%	26.0%	38.4%

ALL ACTIVITIES IN THE LAST 3 MONTHS

Went to a night club/disco	uc	953	17	302	246	257	131
	wc	1643	27	789	484	263	80
	v%	9.0%	2.3%	36.7%	15.2%	5.5%	1.1%
	h%	100.0%	1.6%	48.0%	29.5%	16.0%	4.9%
	tot%	9%	0%	4%	3%	1%	0%
	ix	100	26	408	169	61	13

You will also notice that there are a number of figures that appear at the top the table (above the first row Group *'Went to a night club/disco'*). These are the column total measures, and the measures displayed here will depend on which measures you have selected to display in your table output.

Unweighted Count (uc)

The unweighted count (uc) is the actual number of people interviewed (i.e. respondents). In the table body, this is the number of respondents who belong to both the row and column Groups.

In the table below, for example, by looking at the column total for the Total column, we can see that we interviewed a total of 51,570 people aged 14 years and over (this is our sample). At the same time, we can see that we interviewed 257 people who were 35-49 years who went to a night club/disco in the last three months.

ASTEROID TRAINING DATABASE FOR 2011

Filter: All cases
Weights: Projected population of Australia 14+ (in '000)
No ranking

"Which of the following activities have you done in the last 3 months ?"

> We interviewed 51,570 people in total

> 257 respondents are 35-49 years of age and had visited a night club / disco in the last 3 months

		TOTAL	14-17	18-24	25-34	35-49	TOTAL 50 and Over
(unweighted)	uc	51570	2420	4755	7181	12488	24726
(POPN '000)	wc	18254	1159	2148	3181	4752	7015
	h%	100.0%	6.4%	11.8%	17.4%	26.0%	38.4%

ALL ACTIVITIES IN THE LAST 3 MONTHS

Went to a night club/disco	uc	953	17	302	246	257	131
	wc	1643	27	789	484	263	80
	v%	9.0%	2.3%	36.7%	15.2%	5.5%	1.1%
	h%	100.0%	1.6%	48.0%	29.5%	16.0%	4.9%
	tot%	9%	0%	4%	3%	1%	0%
	ix	100	26	408	169	61	13

AGE - summary

Weighted Count (wc)

By applying weights to the number of people surveyed (uc) we can project our sample (e.g. 51,570 people surveyed) to represent the total population of a country, region or other entity. This projected figure is called the Weighted Count (wc) because the sample has been 'weighted up' to the relevant population parameters. In general, Weighted Counts are shown in thousands (hence the "POPN '000" at the top of the table). In simple terms, this means that we should always add three zeros to the wc figures shown in a table when reading our table outputs.

ASTEROID TRAINING DATABASE FOR 2011

Filter: All cases
Weights: Projected population of Australia 14+ (in '000)
No ranking

"Which of the following activities have you done in the la[...]

		TOTAL	14-17	18-24	25-34		
(unweighted)	uc	51570	2420	4755	7181		
(POPN '000)	wc	18254	1159	2148	3181		
	h%	100.0%	6.4%	11.8%	17.4%		
ALL ACTIVITIES IN THE LAST 3 MONTHS							
Went to a night club/disco	uc	953	17	302	246	257	131
	wc	1643	27	789	484	263	80
	v%	9.0%	2.3%	36.7%	15.2%	5.5%	1.1%
	h%	100.0%	1.6%	48.0%	29.5%	16.0%	4.9%
	tot%	9%	0%	4%	3%	1%	0%
	ix	100	26	408	169	61	13

Callout: We interviewed 51,570 people in total (uc) representing a projected 18,254,000 Australians 14+ (wc)

Callout: 257 respondents (uc) aged 35-49 years old visited a night club / disco in the last 3 months.

263,000 Australians (wc) aged 35-49 years old visited a night club / disco in the last 3 months

In the example above, we surveyed 51,570 respondents who were then projected up so as to be representative of the total Australian population (14+), equivalent to 18,254,000 people (wc).

The uc and wc figures in each row show the people belonging to both the row and column Groups. Thus, we interviewed 257 35-49 year olds who had visited a nightclub/disco in the last three months (uc), representing 263,000 Australians (wc).

Vertical percentage (v%)

The Vertical percentage (v%) shows what percentage of the column Group also belongs to the row Group. Read v% figures vertically then horizontally:

"(x)% of (COLUMN Group) are/do/have/etc. (ROW Group)"

In the Total column:
- 9.0% of the total population visited a night club/disco in the last 3 months.

In the 35-49 column:
- 5.5% of 35-49 year olds visited a night club/disco in the last 3 months.

Horizontal percentage (h%)

The Horizontal percentage (h%) is the percentage of the row Group which also belongs to the column Group. Read h% figures horizontally then vertically:

"(x)% of (ROW Group) are/do/have/etc. (COLUMN Group)"

In the Total column:
- 100% represents all people who had visited a night club/disco in the last 3 months. The h% figures in the other columns are based on the wc figure in the Total column.

In the 35-49 column:
- 16.0% of those who visited a night club/disco in the last 3 months are aged 35-49 years old.

Table Total percentage (tot%)

This is the percentage of the table total who also belong to both the row and column Groups. Read from the table total then to the column and row:

"(x)% of (Table Total) are (COLUMN Group) who are/do/have/etc. (ROW Group)"

In the Total column:
- 9.0% of Australians (14+) went to a nightclub/disco in the last 3 months.

In the 35-49 column:
- 1.4% of Australians (14+) are 35-49 year olds who went to a nightclub/disco in the last 3 months.

Index (ix)

The index is used to indicate the degree to which the people in each column Group conform or differ from the general population (the Total column) for each of the row characteristics (i.e. for each of the items in the rows).

For instance, if we continue with our example from the previous pages, we might be interested in how 35-49 year olds conform or differ from the general population when it comes to visiting night clubs/discos. What the index measures show us is *propensity*, expressed as:

"The (COLUMN Group) is (x)% *more likely/less likely to* [be/do/have/etc]
(ROW Group) *than the average*".

The index is calculated by dividing the v% in the Group column by the v% in the Total column and then multiplying by 100. E.g.:

$$\frac{5.5}{9.0} = 0.61 \ \text{X} \ 100 = \mathbf{61}$$

An index of 100 represents the average. For example, if 17.3% of 18-24yr olds had visited a night club/disco in the last 3 months, and 17.3% of the total population had visited a night club/disco in the last three months, then our calculation would look like this:

$$\frac{17.3}{17.3} = 1.00 \ \text{X} \ 100 = \mathbf{100}$$

It is the difference between the index and 100 which indicates propensity:

- Where the index is less than 100, subtract it from 100 to get the percentage "less likely to…" In our example, 35-49 year olds have an index of 61. Therefore, 35-49 year olds are 39% less likely than the average to have visited a night club/disco in the last 3 months.

- Where the index is more than 100, subtract 100 to get the percentage "more likely to…" In the same table we can see that 18-24 year olds have an index of 408. This means that 18-24 year olds are 308% more likely than the average to have visited a night club/disco in the last 3 months.

When interpreting a table, as a rule–of–thumb, an index falling within 90-110 is not typically considered to indicate notable propensity because it is too close to the average. In some cases however, the very lack of difference is itself of interest. It is also important to take note of the sample size when reading index values; too much significance should not be placed on propensity where it is based on a small sample.

Review and Test Your Understanding

Review

The table below looks at the relationship between the dollar value of products purchased by customers and their opinion of the customer service they received.

CUSTOMER SATISFACTION

"What was the total value of products purchased from our company?"
Filter: Customers

		TOTAL	OPINION OF SERVICE		
			Above expectation	Met expectation	Below expectation
(unweighted)	uc	1000	370	410	220
(popn. '000)	wc	150	56	62	33
	h%	100%	**1** 37%	41%	22%
DOLLARS SPENT					
> $600	uc	180	80	70	30
	wc	27	12	11	5
	v%	18%	22%	17%	14%
	h%	100%	**2** 44%	39%	17%
	ix	100	120	95	76
$400 - $600	uc	420	140	200	80
	wc	63	21	30	12
	v%	42%	38%	49%	36%
	h%	100%	33%	**3** 48%	19%
	ix	100	90	116	87
< $400	uc	400	150	140	110
	wc	60	23	21	17
	v%	40%	41%	34%	**4** 50%
	h%	100%	38%	35%	28%
	ix	100	101	85	125

We can see that:

1. 37% of customers thought service was above their expectations, 41% of customers thought it met their expectation and 22% thought it was below expectation.

2. Customers who rated service as above expectation were 20% more likely than the average to have spent over $600.

3. Of all customers who spent $400-$600, 48% thought service met their expectation.

4. Of all customers who thought service was below expectation, 50% spent less than $400.

Not sure where those figures came from?

A. To find the percentage of people in each column Group we looked at the h% for the columns – i.e. the h% at the top of the table.

B. The index tells us if a Group is more or less likely to do something, so we looked at the indices for the Above Expectation column and found that in the >$600 row the index was 120. Being over 100 means that this group is more likely to have spent at least this much compared to the average customer.

C. Here we looked at the h% in the row to see what percentage of that row Group (spent $400-$600) also belonged to the column Group (Met Expectation).

D. Looking at the v% for the Below Expectation column tells us that 50% of these people had spent <$400.

Test your understanding (Unfiltered Tables)

CUSTOMER SATISFACTION

"What was the total value of products purchased from our company?"
Filter: Customers

			OPINION OF SERVICE		
		TOTAL	Above expectation	Met expectation	Below expectation
(unweighted)	uc	1000	370	410	220
(popn. '000)	wc	150	56	62	33
	h%	100%	37%	41%	22%
DOLLARS SPENT 1st QUARTER					
> $600	uc	180	80	70	30
	wc	27	12	11	5
	v%	18%	22%	17%	14%
	h%	100%	44%	39%	17%
	ix	100	120	95	76
$400 - $600	uc	420	140	200	80
	wc	63	21	30	12
	v%	42%	38%	49%	36%
	h%	100%	33%	48%	19%
	ix	100	90	116	87
< $400	uc	400	150	140	110
	wc	60	23	21	17
	v%	40%	41%	34%	50%
	h%	100%	38%	35%	28%
	ix	100	101	85	125

Using this example, answer the following questions, writing the answer in the space provided.

Test your understanding (Unfiltered Tables) Questions

• How many customers surveyed said that they thought service was above expectation and how many customers does this represent overall?

....

• What percentage of customers, who spent $400-$600, thought that service was below expectation?

....

• What does the index tell us about customers who thought service met their expectations and had spent < $400?

....

• What percentage of customers spent over $600?

....

Reading the figures – Filtered tables

Focusing on reading the figures from a filtered table rather than how to create a filtered table (which is discussed in the previous section), we'll look at the example on the following page. You can see that we have taken the previous table and applied a **Filter** of 'Been a customer for 1 year'.

When we read the figures we have to remember that the table is now based on people who have been customers for a year. So, looking at the Met Expectation column:

1. Of all people surveyed *who've been customers for a year*, 328 thought service met their expectations (uc).

2. So 49,000 people *who've been customers for a year*, thought service met their expectations (wc).

3. *Of 1 year customers* surveyed, 62 had spent over $600 in the first quarter and thought service met their expectation. (uc) This represents 9,000 customers overall. (wc)

4. *Of 1 year customers* who said service met their expectations, 19% had spent over $600 in the first quarter (v%).

5. *Of 1 year customers* who'd spent over $600, 38% said that service met their expectations (h%).

6. People *who've been customers for a year* and said service met their expectations, were 7% less likely[1] than the average 1+ year customer to have spent over $600 (ix).

---

[1] Here we are simply *reading* the figures, not *interpreting* them, so the fact that this index falls in the 90 – 110 range mentioned earlier can be overlooked.

CUSTOMER SATISFACTION

"What was the total value of products purchased from our company?"
Filter: Been a customer for 1 year

| | | | OPINION OF SERVICE | | |
		TOTAL	Above expectation	Met expectation	Below expectation
(unweighted)	uc	800	296	328	176
(popn. '000)	wc	120	44	49	26
	h%	100%	37%	41%	22%
DOLLARS SPENT 1st QUARTER					
> $600	uc	162	72	62	28
	wc	24	11	9	4
	v%	20%	24%	19%	16%
	h%	100%	44%	38%	17%
	ix	100	120	93	79
$400 - $600	uc	376	126	176	74
	wc	56	19	26	11
	v%	47%	43%	54%	42%
	h%	100%	34%	47%	20%
	ix	100	91	114	89
< $400	uc	262	98	90	74
	wc	39	15	14	11
	v%	33%	33%	27%	42%
	h%	100%	37%	34%	28%
	ix	100	101	84	128

Using Layers in a table

In the example illustrated on the facing page we have removed the filter from the last example and instead applied 'Rewards club membership' as a **Layer** in the Tabulation task. This produces tables over multiple sheets – or **layers**.
This example uses the Variable 'Rewards club member' in the layer. This Variable contains two Groups of people: Member and Not Member. Therefore the following layers are displayed:
- All – this shows all people, i.e. both Members and Non Members.
- Members – this shows only rewards club members.
- Not Member – this shows only customers who are not members of the rewards club.

With both the Members and Not Members tables we read the figures as we would on any filtered table. However there is now an extra figure – the **z%**.

Layer percentage (z%)

This is the percentage of people belonging to both the row and column Groups who are part of the layer Group.

Example:
Here we can use the z% to view those customers who spent over $600 and thought service was above expectation, and see what percentage of them are members of the reward club.

If you look at the figures in the total column you can see:
- 118,000 customers are reward club members (wc).
- 20% of members spent over $600 in the first quarter (v%).
- 98% of all customers who spent over $600 are members (z%).

If you look at the figures in the 'above expectation' column you can see:
- 45% of members who spent more than $600 thought the service was above expectation (h%).
- Of all members who thought the service was above expectations, 24% spent more than $600 (v%).
- Of those whose opinion of service is 'above expectation', they are 18% more likely than the average member to have spent more than $600 (ix).

You can also see that:

- 96% of customers who spent over $600 and rated service above expectation, are members of the rewards club (z%).

```
CUSTOMER SATISFACTION

"What was the total value of products purchased from our company?"
Filter:
Layer: Rewards Club Member
```

		TOTAL	OPINION OF SERVICE Above expectation	Met expectation	Below expectation
(unweighted)	uc	785	300	316	169
(popn. '000)	wc	118	45	47	25
	h%	100%	38%	40%	22%
DOLLARS SPENT 1st QUARTER					
> $600	uc	160	72	60	28
	wc	24	11	9	4
	v%	20%	24%	19%	17%
	h%	100%	45%	38%	18%
	z%	98%	96%	98%	97%
	ix	100	118	93	81
$400 - $600	uc	366	127	163	74
	wc	55	19	24	11
	v%	47%	42%	52%	44%
	h%	100%	35%	45%	20%
	z%	87%	85%	85%	83%

```
< > \ All cases /\ Member /\ Not Member /
```

Note: You can combine Filters and Layers in one table and we could use this in our example to look at rewards club members who have been a customer for one year. Remember when combining Filters and Layers always take extra care in reading and interpreting the figures.

Review

In the table on the next page, we are looking at the age and sex of mobile phone owners, who use the phone mainly for business purposes.

The table is:

- *filtered* to 'mobile phone owners'
- *layered* for 'usage purpose'
- we are looking at the *Mainly Business* layer.

Example:

Looking at the 35-49yr old column in the table below, we can see that:

- 45.8% of people who own a mobile phone and use it mainly for business purposes are aged 35-49 (h%).
- 533,000 of them are men (wc).
- 81.8% of 35-49yr old mobile owners, using it mainly for business are men (v%).
- Of all men who own a mobile phone and use it mainly for business, 46.0% are aged 35-49 (h%).
- Of all men who own a mobile phone and are aged 35-49, 24.9% use it mainly for business (z%).

NOTE – when using an item in the Layers, ASTEROID now returns the name of the Variable as well as the Group item, as shown below (previously it only displayed the Group item. When creating a chart, ASTEROID will display the full Layer text as a second Chart Title Line
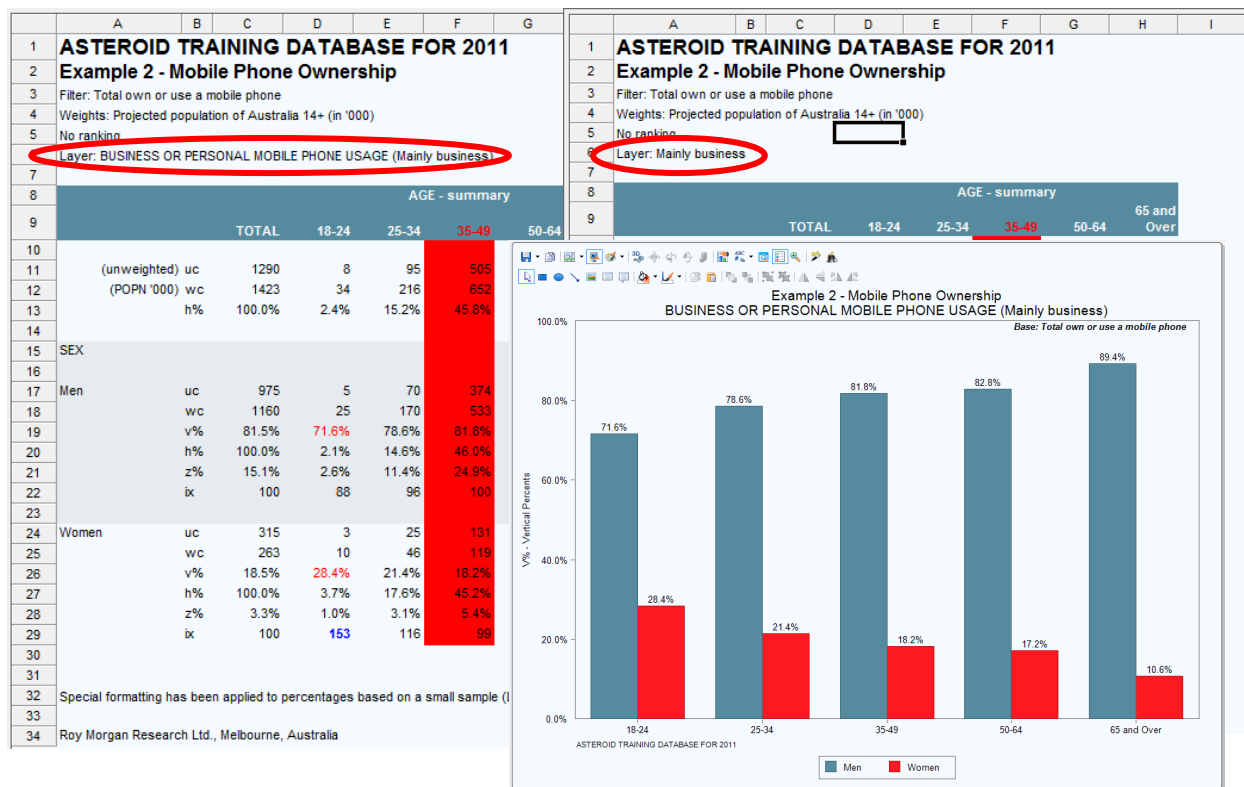
Test your understanding (Filtered Tables)

Using the same example (reproduced below), answer the questions in the spaces provided on the facing page:

	A	B	C	D	E	F	G	H	I
1	**ASTEROID TRAINING DATABASE FOR 2011**								
2	**Example 2 - Mobile Phone Ownership**								
3	Filter: Total own or use a mobile phone								
4	Weights: Projected population of Australia 14+ (in '000)								
5	No ranking								
6	Layer: BUSINESS OR PERSONAL MOBILE PHONE USAGE (Mainly business)								
7									
8					AGE - summary				
9			TOTAL	18-24	25-34	35-49	50-64	65 and Over	
10									
11	(unweighted)	uc	1290	8	95	505	591	89	
12	(POPN '000)	wc	1423	34	216	652	461	55	
13		h%	100.0%	2.4%	15.2%	45.8%	32.4%	3.9%	
14									
15	SEX								
16									
17	Men	uc	975	5	70	374	447	78	
18		wc	1160	25	170	533	382	49	
19		v%	81.5%	71.6%	78.6%	81.8%	82.8%	89.4%	
20		h%	100.0%	2.1%	14.6%	46.0%	32.9%	4.2%	
21		z%	15.1%	2.6%	11.4%	24.9%	22.5%	5.3%	
22		ix	100	88	96	100	102	110	
23									
24	Women	uc	315	3	25	131	144	11	
25		wc	263	10	46	119	79	6	
26		v%	18.5%	28.4%	21.4%	18.2%	17.2%	10.6%	
27		h%	100.0%	3.7%	17.6%	45.2%	30.1%	2.2%	
28		z%	3.3%	1.0%	3.1%	5.4%	4.5%	0.5%	
29		ix	100	153	116	99	93	57	
30									
31									
32	Special formatting has been applied to percentages based on a small sample (Less than 50)								
33									
34	Roy Morgan Research Ltd., Melbourne, Australia								

Test your understanding (Filtered Tables) Questions

1. How many mobile phone owners, who use their phone mainly for business, were surveyed?

   ....

2. What percentage of female mobile phone owners, aged 18-24, said they use their phone mainly for business?

   ....

   ....

3. Of the female mobile phone owners, which age Group has the highest percentage of those who use it mainly for business?

   ....

4. Looking at 65+yr old women, what does the v% tell us?

   ....

   ....

5. Looking at 35-49 yr old women, what does the index indicate?

   ....

   ....

Answers

1. The number of people surveyed is always the uc and the number of people this represents is always the wc, so by looking at the 'above expectation' column we can see that 370 customers surveyed said service was above expectation and that they represent 56,000 customers.

2. When you want to find the percentage of a row Group you look at the h% in the relevant column, so 19% of customers who spent $400-$600 in the first quarter, thought service was below expectation.

3. Customers who said service met their expectations are 15% less likely than the average customer to have spent < $400.

4. Looking at the total column the v% tells us that 18% of customers spent over $600 in the first quarter.
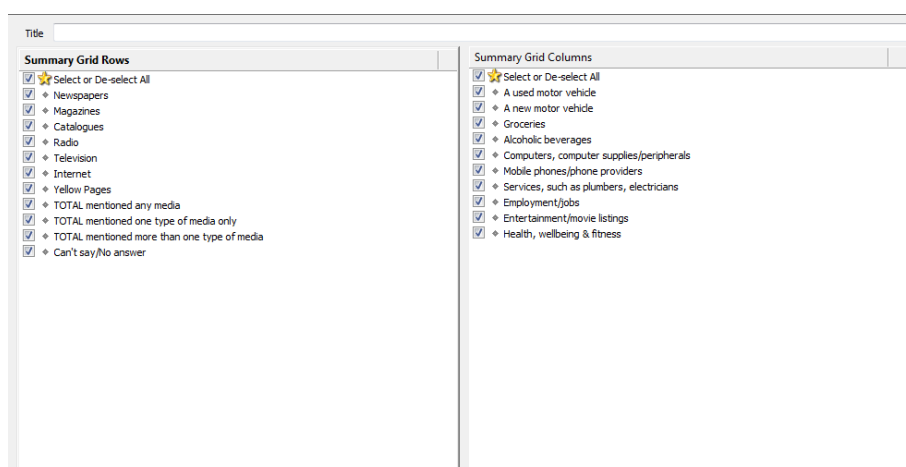
1. The unweighted count in the total column shows us that 1,290 mobile phone owners, who use their phone mainly for business, were surveyed.

2. Whenever you want to find the percentage of people belonging to the layer you look at the z%, so 1.0% of female mobile phone owners, aged 18-24, said they use their phone mainly for business.

3. Looking at the z percentages we can see that 5.4% the 35-49yr old female mobile phone owners said they use their mobile mainly for business.

4. 10.6% of 65+yr old mobile owners, who use their mobile mostly for business, are women.

5. Mobile phone owners who are aged 35-49 and use their phone mainly for business are 1% less likely than the average to be women.

Grid Variable

Grid variables (also known as Summary Grid variables) are used to combine questions that share a common response set into a single table, such as statements ratings. The questions are usually represented in the Columns and the response set is displayed in the Rows.

When a grid variable is selected from the dictionary, the Selection form changes to show the row and column components alongside each other rather than one above the other:

You can customize the grid variable in the following ways.
- Create a subset Summary Grid on the fly.
  - Select or Deselect All items by clicking the first check box.
  - Select or Deselect only those items required by clicking the check box on individual rows or columns.
- Swap rows and columns with a single click using the Swap command on the context menu or Selection toolbar.

The table resulting from the Grid variable can be further customized using the standard tabulation features.
- Selection of applicable measures required, e.g. weighted counts, index, etc.
- Filters.
- Layers.
- Quantities (if applicable).

Here is an example of a subset of the grid variable:

The de-selection of items is preserved in the resulting Table, Chart and all the characteristics are saved when the task is added to a Report Folder for future recall. This feature is particularly useful when presenting information in a spider or radar chart – refer below:

Following elements suppressed:
Legend:
- Newspapers
- Radio
- Television

Chart Labels:
- Groceries
- Alcohol
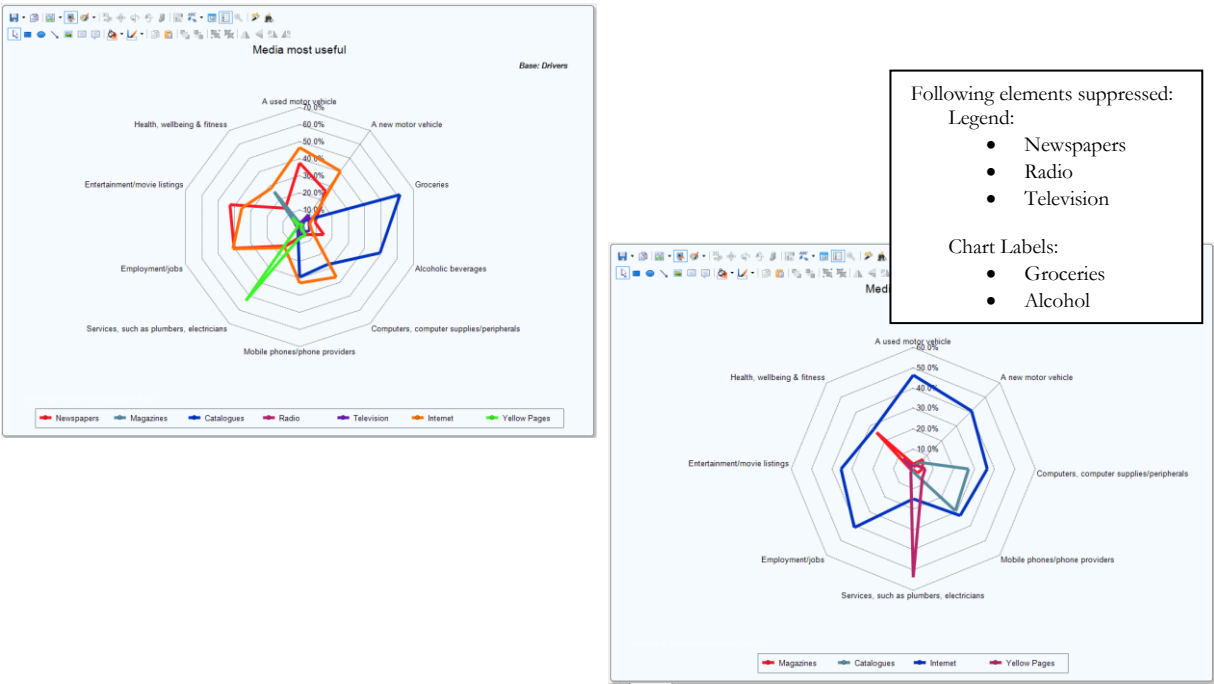
Suppressed bases

It is sometimes necessary to use an internal base (that is, force the calculated measures to be based on the base rather than the overall population. For example, we may want to limit the calculation as follows:

- Awareness, Ad Recall and Brand Rejection calculated based on "New Car Intenders"
- Loyalty calculated based on "Drivers"

These two internal bases can be suppressed so that they do not appear in the Table or Chart.

Useful Tools and Other Major Features

Ranking

Ranking provides an easy way to focus in on the data that interests you, particularly in larger tables. Through ranking you might, for example, choose to show the top ten highest v%'s for a particular column in your table.

How to specify settings for Ranking

Ranking options are set via the Settings (Task) or the Settings (Global) buttons. As with other settings, if you make changes in the Settings (Task) window, this will take precedence over the Global settings for the task you are currently running.

Global settings will only take effect on new tasks that are created after the current task.
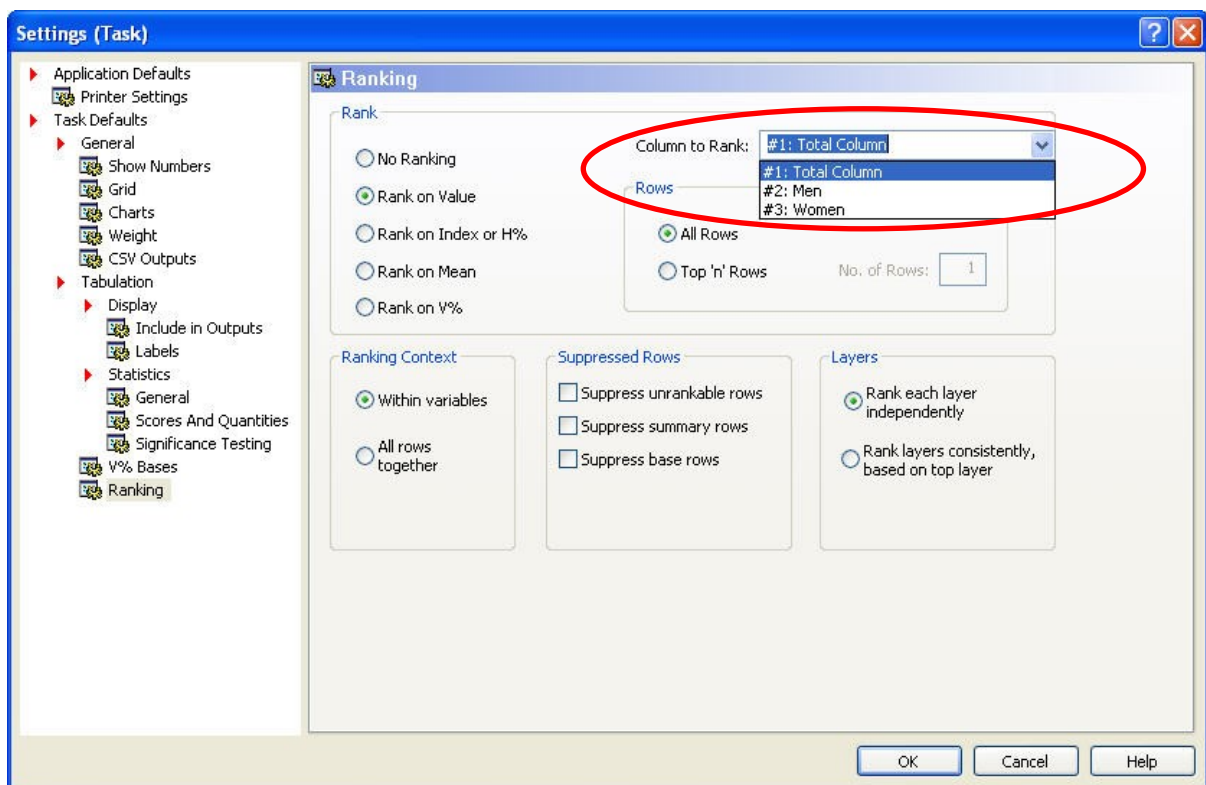
Parameter Definitions

The following section explains each ranking parameter in the settings window:

Rank

No Ranking	This is the default. No ranking is to be applied to your table.
Rank on Value	Rows shown in descending order of Weighted Counts.
Rank on Index or H%	Ranks 'most likely' down to 'least likely'.
Rank on Mean	Where scores are applied to Groups, this will rank the highest mean values down to the lowest. Will also rank quantity means.
Rank on V%	The Group that represents the highest proportion down to the lowest. This will usually be the same ranking results as 'Value', except where you have Groups subject to different bases.
Column to Rank	Select the column you wish to rank within your table. Columns are numbered and named (compiling variable, group and nested item names, where applicable), and listed in the order they appear on the grid.
Rows: All Rows	This will rank every row in your table, from top to bottom.
Rows: Top 'n' rows (No. of Rows)	This will rank the top 'n' rankable rows. For example you may be interested in the top 5 or top 20 results only.

Ranking Context

Within Variables	If more than one Variable is displayed in the rows, this will rank the Groups within each Variable. For example: VIC – Places like to holiday - highest preference to lowest NSW – Places like to holiday - highest preference to lowest QLD – Places like to holiday - highest preference to lowest
All rows together	If more than one Variable is displayed in the rows, this will mix the Groups up and list them in the highest to lowest order, regardless of Variable. For example: Surfers Paradise (QLD) = 12% Noosa (QLD) = 11% Melbourne (VIC) = 10% Sydney (NSW) = 8% Great Ocean Road (VIC) = 6% Port Douglas (QLD) = 5%

Suppressed Rows

Suppress unrankable rows	When this option is selected, all Groups like 'Can't say' or 'No Answer' which have been declared as 'MISSING' or 'NO ANSWER' in the data dictionary will be not be shown. A declared missing item is classed as unrankable, and therefore not included in the items ranked.
Suppress summary rows	When this option is selected, all 'Total' Groups which have been declared as 'SUMMARY' in the data dictionary (e.g. 'Total aged 18-24yrs' or 'Total Discount Stores') will be suppressed. These summary groups will be included in ranking when using the associated Variable unless defined initially in the data dictionary as 'NORANK'.
Suppress base rows	When this option is selected, a Variable which includes a base (e.g. 'Federal Vote – 1st Preference' has a base of 'Electors') will have the base suppressed. The base will be included in the ranking unless defined initially in the data dictionary as 'NORANK'. Note: that the base will still influence the table even when suppressed.

Layers

Rank each layer independently	Each table will be assessed and ranked separately to each of the other tables in the layers. For example, if 'Age - Summary' is in Layers: A. Will rank results within 18-24 B. Will rank results within 25-34 C. Will rank results within 35-49 Etc.

Rank layers consistently, based on top layer	Will ascertain the highest to lowest ranking on the 'All Cases' tab, then list the same order on each of the layers, displaying the associated values and percentages on each layer.
	For example, if Ages are in Layers, and Holiday Activities are in rows, the top 3 ranked activities in 'All cases' might be Beach, then National Parks, then Cities. Each of the Ages will display the same order, 'Beach, National Parks, Cities' but with the associated Age's figures:
	18-24: Beach 18% National Parks 4% Cities 11%
	25-34: Beach 15% National Parks 16% Cities 16%
	35-49: Beach 13% National Parks 19% Cities 15%

When you click OK in the settings window ASTEROID will re-run the table to display the selected ranking if the table has been run previously.

If a Grid or Report tabulation has been ranked, the output will include a label indicating key ranking information including which column the tabulation is ranked on, as illustrated below:
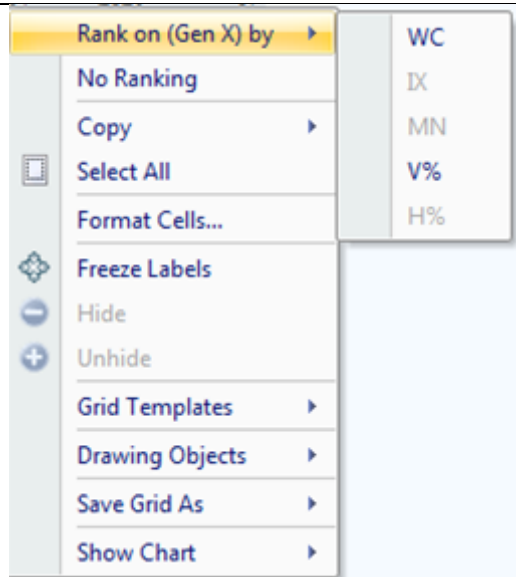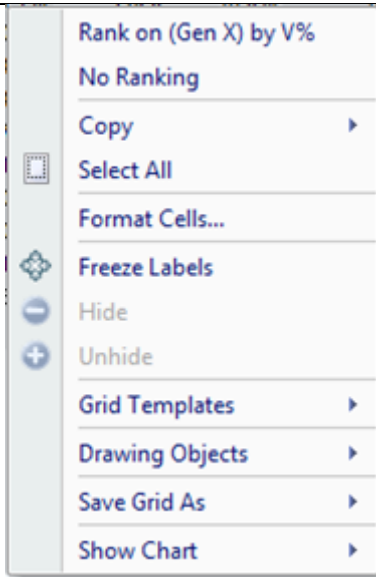
Note: The Ranking Context ('Within Variables' or 'All rows together') option will rank individual groups that are selected as well as entire variables.

Dynamic Ranking

Basic ranking can now be performed on "Tabulation" tasks using the context menu.

When you hover over a column and use the right mouse click, ASTEROID will allow you to rank the specific column and appropriate measures can be ranked. Ranking can also be removed using the context menu. ASTEROID recognises the Grid version being used (Grid-V or Grid-H) and will display the relevant option – as shown below:

Grid-V	Grid-H

Nesting

Nesting is a slightly more advanced feature where users can create a single Variable nest for either rows and columns or both. This means that on a single table, results for a Variable can be 'divided' into appropriate nested Groups, such as Male/Female, Age, Marital Status or Regions.

In the following examples, the rows have nesting applied. You may apply nesting within either rows or columns. Nesting can also be applied from the Selection Toolbar.
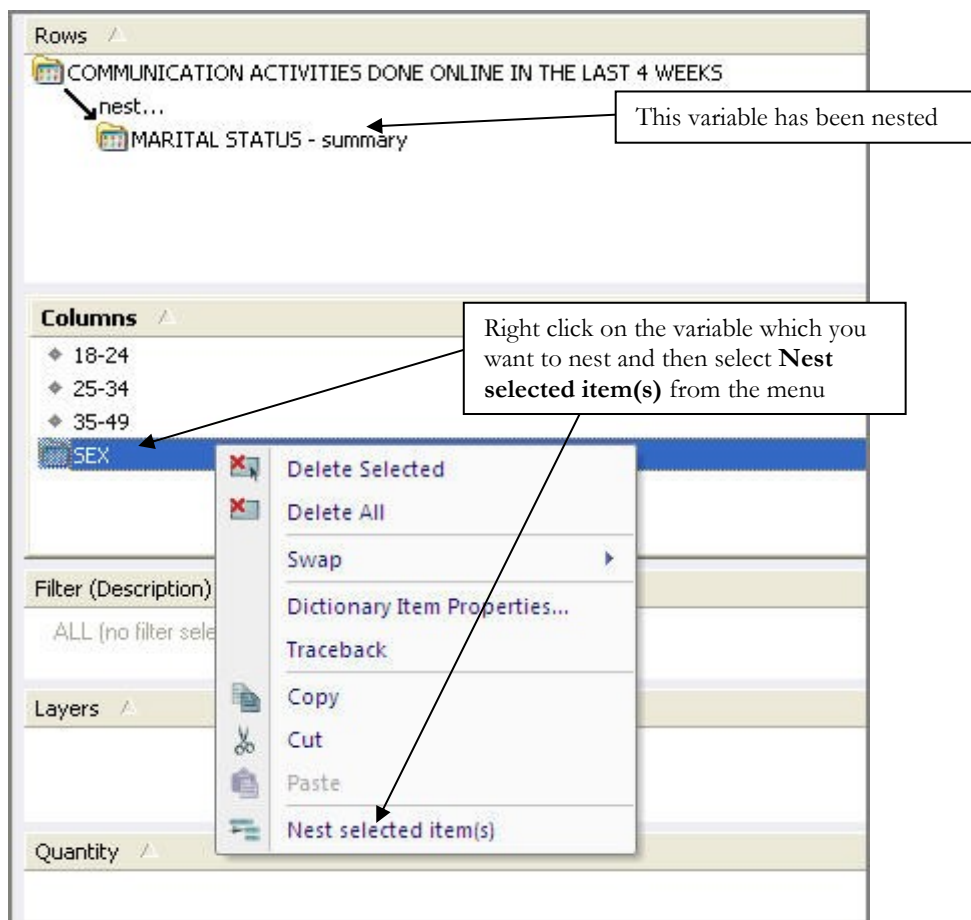
This is an example of a table with nested rows and columns (using formatting to illustrate the nesting):

> For each Group within the Ages Variable, nested Groups of Men and Women are shown

		TOTAL	18-24 TOTAL	18-24 Men	18-24 Women	25-34 TOTAL	25-34 Men	25-34 Women	35-49 TOTAL	35-49 Men	35-49 Women
(unweighted)	uc	51570	4755	2536	2219	7181	3645	3536	12488	6045	6443
(POPN '000)	wc	18254	2148	1072	1075	3181	1597	1584	4752	2367	2384
	h%	100.0%	11.8%	5.9%	5.9%	17.4%	8.7%	8.7%	26.0%	13.0%	13.1%
COMMUNICATION ACTIVITIES DONE ONLINE IN THE LAST 4 WEEKS											
Email	uc	8230	514	201	313	1088	452	636	2446	969	1477
	wc	9328	1387	699	687	2116	1079	1037	2678	1312	1366
	v%	51.1%	64.6%	65.2%	63.9%	66.5%	67.6%	65.5%	56.4%	55.4%	57.3%
	h%	100.0%	14.9%	7.5%	7.4%	22.7%	11.6%	11.1%	28.7%	14.1%	14.6%
MARITAL STATUS - summary											
Married/De Facto	uc	5238	92	18	74	697	274	423	1765	748	1017
	wc	5478	197	66	131	1295	604	691	2081	1073	1008
	v%	30.0%	9.2%	6.2%	12.2%	40.7%	37.8%	43.6%	43.8%	45.3%	42.3%
	h%	100.0%	3.6%	1.2%	2.4%	23.6%	11.0%	12.6%	38.0%	19.6%	18.4%
Single/Not Married	uc	2992	422	183	23…	…	…	…	681	221	460
	wc	3849	1189	633	55…	…	…	…	597	239	358
	v%	21.1%	55.4%	59.0%	51.7%…	…	…	…	2.6%	10.1%	15.0%
	h%	100.0%	30.9%	16.5%	14.4%…	…	…	…	6.5%	6.2%	9.3%
Instant Messaging (eg. Yahoo! Messenger)	uc	1472	214	96	…	…	…	…	398	173	225
	wc	2295	590	325	26…	…	…	…	424	221	203
	v%	12.6%	27.5%	30.3%	24.6%…	…	…	…	8.9%	9.3%	8.5%
	h%	100.0%	25.7%	14.2%	11.5%	27.1%	16.8%	10.3%	18.5%	9.6%	8.8%
MARITAL STATUS - summary											
Married/De Facto	uc	684	22	8	14	178	87	91	242	108	134
	wc	855	52	31	21	362	199	163	276	150	126
	v%	4.7%	2.4%	2.9%	1.9%	11.4%	12.4%	10.3%	5.8%	6.3%	5.3%
	h%	100.0%	6.1%	3.6%	2.4%	42.3%	23.2%	19.1%	32.2%	17.5%	14.7%
Single/Not Married	uc	788	192	88	104	117	73	44	156	65	91
	wc	1440	538	294	244	259	187	73	148	71	77
	v%	7.9%	25.0%	27.4%	22.7%	8.1%	11.7%	4.6%	3.1%	3.0%	3.2%
	h%	100.0%	37.3%	20.4%	16.9%	18.0%	13.0%	5.0%	10.3%	5.0%	5.3%

> For each group within the 'Communication' variable, nested results are displayed for each 'marital status' group

There are two options for reading the nested data. In the example above the nested data is based on the v% within the TOTAL column or within the heading row Group. The setting for this is specified as "v% - Inherit the context from the branch under which the items are nested".

For example, looking at one Group, with Marital Status nested:

		18-24		
			SEX	
		TOTAL	TOTAL	Men	Women
(unweighted) uc	50634	4407	2388	2019
(POPN '000) wc	19706	2248	1152	1096
h%	100.0%	11.4%	5.8%	5.6%

COMMUNICATION ACTIVITIES DONE ONLINE IN THE LAST 4 WEEKS

Email					
	uc	9207	564	246	318
	wc	14053	1789	897	892
	v%	71.3%	79.6%	77.8%	81.4%
	h%	100.0%	12.7%	6.4%	6.3%

MARITAL STATUS

TOTAL Married/De Facto					
	uc	5569	96	36	60
	wc	8331	271	115	156
	v%	42.3%	12.0%	10.0%	14.2%
	h%	100.0%	3.2%	1.4%	1.9%

TOTAL Single/Not Married					
	uc	3638	468	210	258
	wc	5723	1518	782	736
	v%	29.0%	67.5%	67.9%	67.1%
	h%	100.0%	26.5%	13.7%	12.9%

These two 'marital status' results combine to give the overall v% for this row

67.9% of 18-24 year old Men use the internet for email and are single.

Reading the data:

- 64.6% of 18-24 year olds have used email in the last 4 weeks.
- 9.2% of 18-24 year olds have used email in the last 4 weeks and are married/de facto.
- 55.4% of 18-24 year olds have used email in the last 4 weeks and are single/not married.

By changing the settings, it is possible to view this data in a different way.

Go to Settings (Task) and click on the V% Bases option. Change the setting within the 'Base for Nested Items' area:
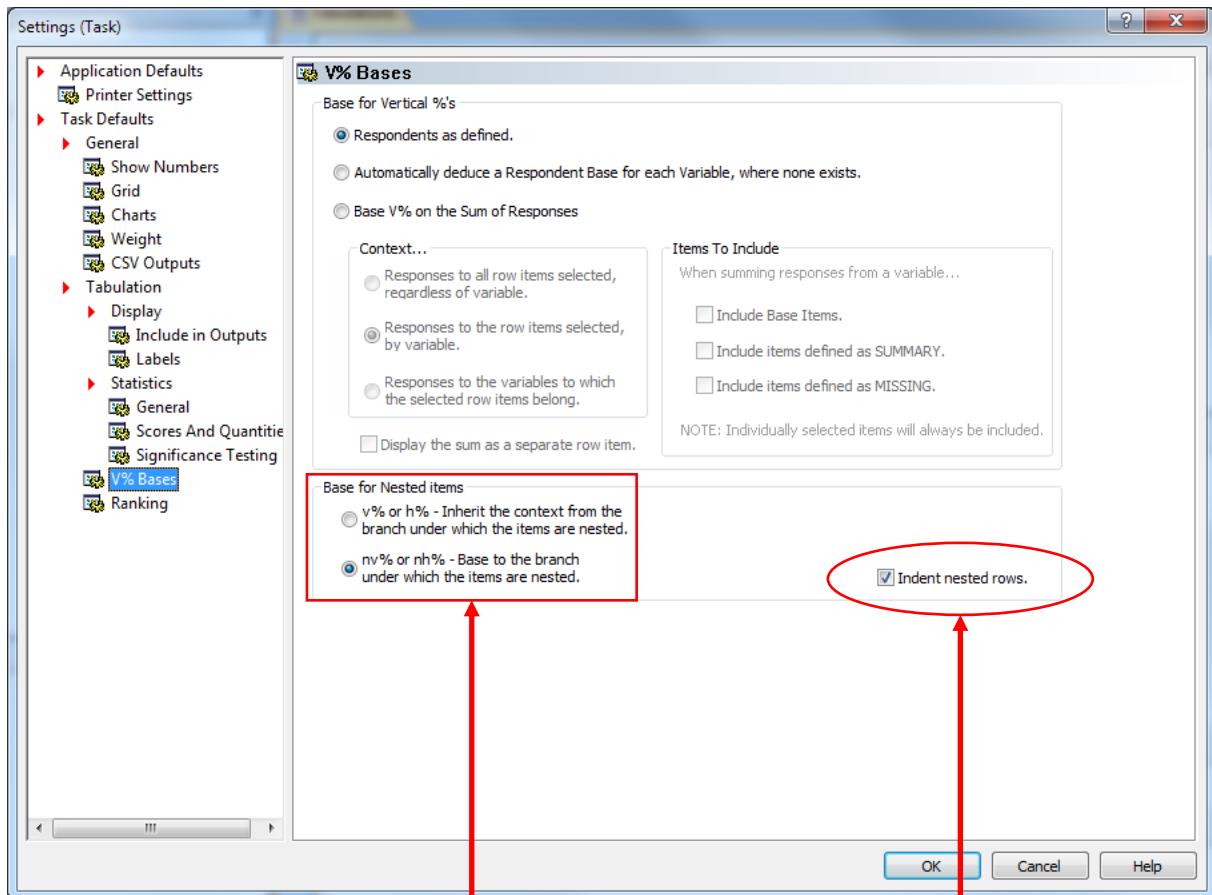
By choosing the second option of nv%, the data will be displayed as it is in the example on the following page.

(Note: it is also possible to indent nested rows)

			18-24		
				SEX	
		TOTAL	TOTAL	Men	Women
(unweighted)	uc	50634	4407	2388	2019
(POPN '000)	wc	19706	2248	1152	1096
	h%	100.0%	11.4%		
	nh%		=100%	51.2%	48.8%

COMMUNICATION ACTIVITIES DONE ONLINE IN THE LAST 4 WEEKS

Email	uc	9207	564	246	318
	wc	14053	1789	897	892
	v%	71.3%	79.6%	77.8%	81.4%
	h%	100.0%	12.7%		
	nh%		=100%	50.1%	49.9%

MARITAL STATUS

TOTAL Married/De Facto	uc	5569	96	36	60
	wc	8331	271	115	156
	nv%	59.3%	15.1%	12.8%	17.5%
	h%	100.0%	3.2%		
	nh%		=100%	42.4%	57.6%
TOTAL Single/Not Married	uc	3638	468	210	258
	wc	5723	1518	782	736
	nv%	40.7%	84.9%	87.2%	82.5%
	h%	100.0%	26.5%		
	nh%		=100%	51.5%	48.5%

This data can be read as follows:

12.7% (wc 1,789,000) of those who used email are in the 18-24 year old age group.

Of those people, 50.1% are men and 49.9% are women.

This data can be read as follows:

Of the 18-24 year old Men who used Email (wc 897,000), 12.4% are Married/De Facto and 87.2% are Single.
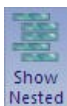
When a table has been 'Nested', it is possible to hide the Nested (row only) variable displayed on the Grid view by toggling the Show Nested button on the Output tab.

Nesting Options

The Total Row contains the Nested items
- Have the Total Row also displaying the Nested item values

The Total Column contains the Nested Items
- Have the Total Column also displaying the Nested item values

Nested Rows show a Total Row
- Determines whether or not a Total Row is displayed for Nested items

Nested Columns show a Total Column
- Determines whether or not a Total Column is displayed for Nested items

Finding Variables

Bookmarks

ASTEROID provides a bookmark function within the Data Dictionary window plus a new Bookmarks TAB which allows you to quickly access bookmarked Classes, Entities and Variables.

To quickly use a bookmarked item simply click on Bookmark TAB, select the item required and use in the analysis as appropriate.

To bookmark a Class, Entity or Variable, right-mouse click over your chosen data item, then select 'Bookmarks', then 'Set'. This will ensure the item appears in the Bookmarks List, and will appear in **bold** in the Data Dictionary, as shown below.
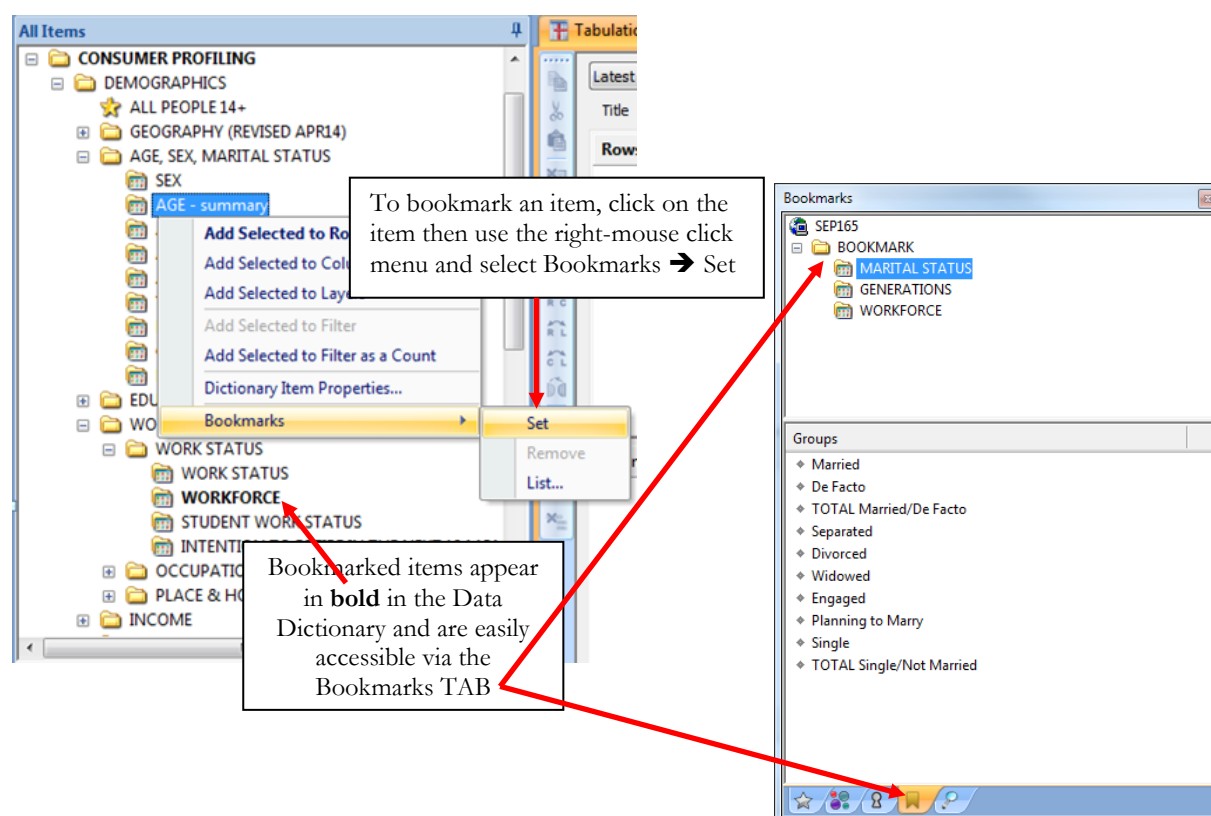
Traceback

Sometimes when you are looking through a database and adding items to your table, you may forget where you found one of the selected items. On the Selection pane right-mouse click on the Group or Variable and then select Traceback from the menu - this will expand the folders in the Data Dictionary to show the location of the Group or Variable.

Find

The Find tab in the Data Dictionary allows you to search for any items that are contained in the open database. The results are then displayed dynamically as you type. By default, Find will search in the description part of the data dictionary for the text being typed. For example, the following diagram highlights (from left to right) how the results are displayed as you type the word "owe":
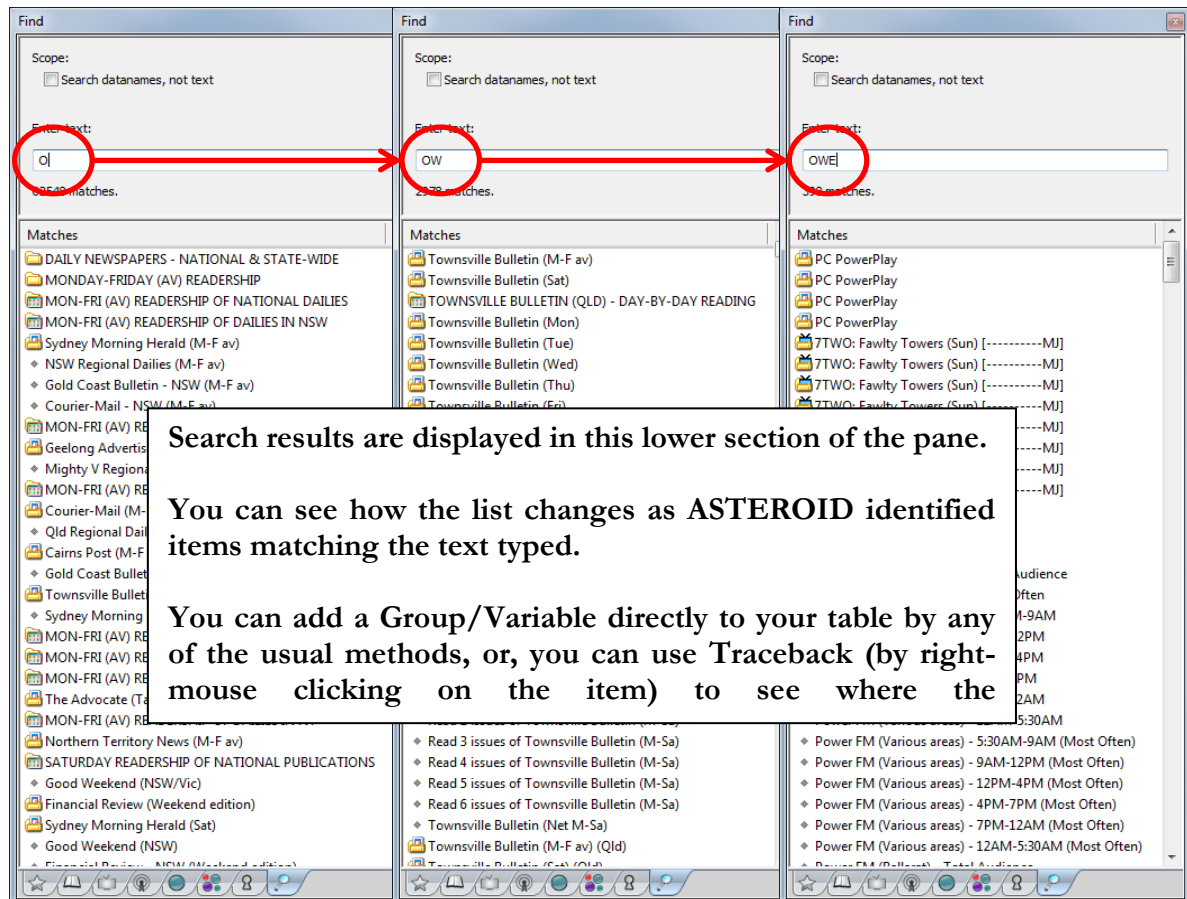
Alternatively, you can use Find to search for items by their data names.

Data names are 'one-word' (no spaces) 'codes' that are automatically generated by the ASTEROID program to name the items and used to look for a specific class, entity, variable or group within the database. Searching for data names is rare and only usually performed by those who know their databases very well.
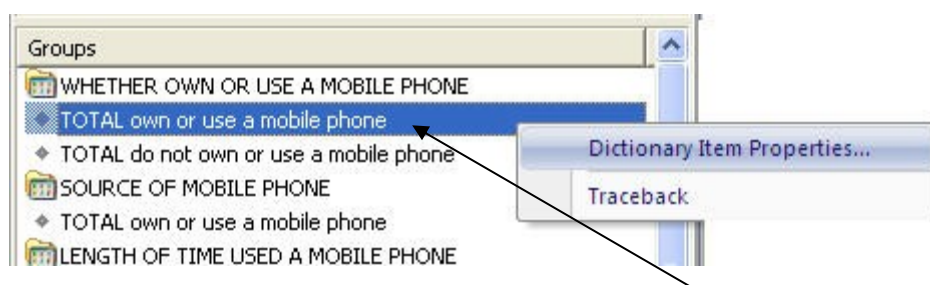
To find out specific details of any class, entity, variable or group within the database, right mouse click on it and select Dictionary Item Properties.
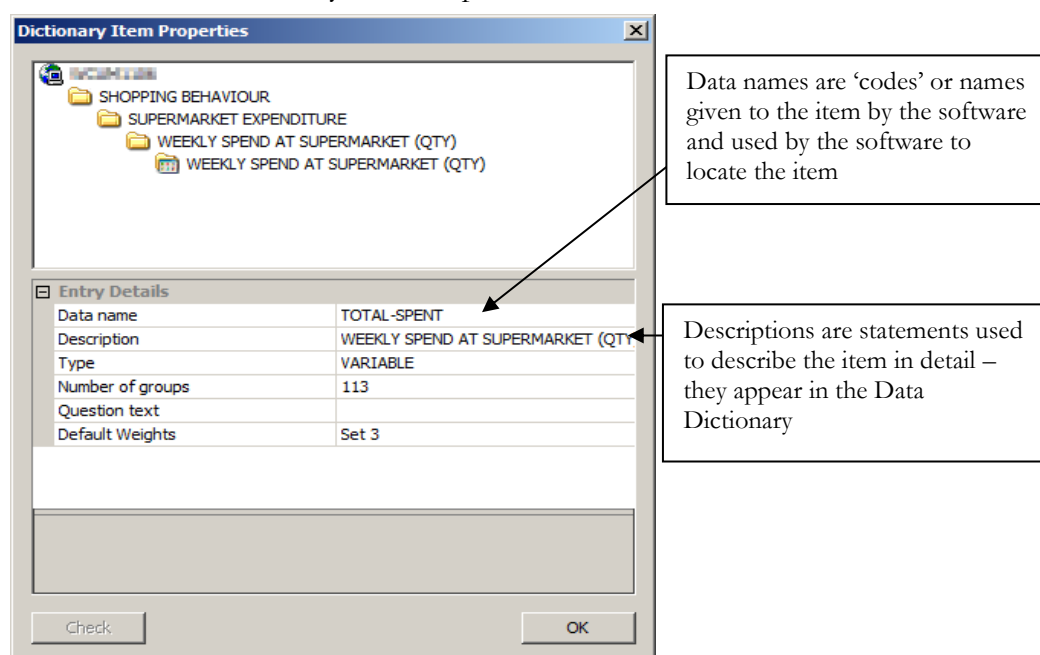
For more information on Descriptions and Data names see Private Definitions overleaf.

Private Definitions

Another way of working with your data is to create your own definitions, also called 'private' or 'ad hoc' definitions. For example, you might be interested in the purchasing behaviour of 25 – 29yr old males who earn a certain income and by creating a definition combining age, sex and income you could then use the definition in a row, with the purchasing habits in the columns.

There are two types of 'ad hocs' you can create; a single definition, called an Entity or a custom Variable which contains a group of definitions. The combination of age, sex and income in a single definition would be an Entity. Creating an ad hoc Variable allows us to group together a series of single definitions.

Where to find your Private Definitions

When you open any database, it will automatically contain a Private class at the bottom of the Data Dictionary. Any Private Definitions you create will be listed within the PRIVATE folder in the Data Dictionary:

Note: The star icon here indicates an Entity.
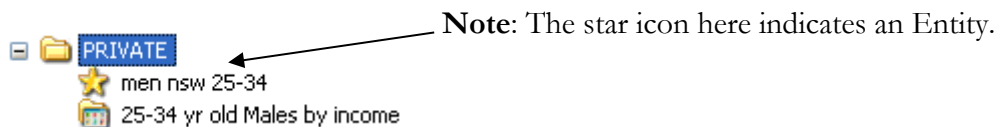
or via the Private tab at the bottom of the Data Dictionary:

How to create a Private Definition ('ad hoc')

1. There are a number of ways to access the Create Definition window. You can click on the Create Definition button found in the Dictionary group on the Home tab and choose 'Create Definition' from the options menu that appears:
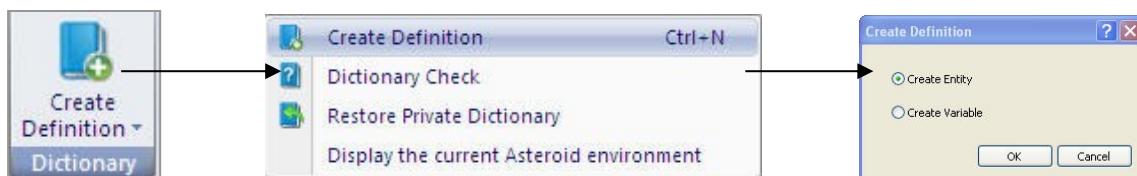
Alternatively, you can click on the Create Definition button on the Task tab, which will directly open the 'Create Definition' dialog box:
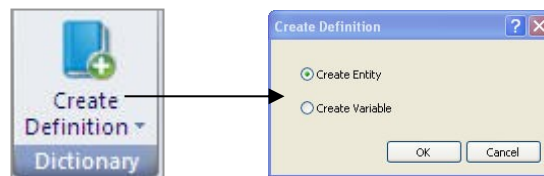
It is also possible to right-mouse click on PRIVATE in the data dictionary and make your selection from the Create group (**Note**: This option must be used to enable creation of a new Class).
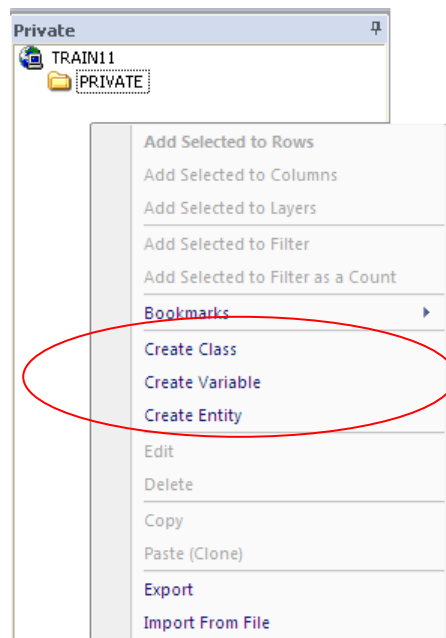
2. Choose whether you want to create an Entity or Variable, or if the above is option used, Class, then click OK.

Tip: All the items you create in the Private Dictionary are stored in your user directory in a file labelled <*database*.PRW>, where 'database' is the name of the database in which the definitions were created. You are also able to import previously created, or someone else's, .prw files (sometimes with restrictions) or export them elsewhere – please see Exporting and Importing Private Definitions on page 80.

Entity

If you have selected 'Entity' the Private Editor screen is displayed as follows:

Follow these steps to create an Entity:

1. With the top line highlighted, create a filter for the entity – this will automatically populate the Description and Definition fields. Note that the Name field already contains a unique data name.

To create the example mentioned earlier, locate and double click 'Men' to add it to the Definition field, then locate and highlight '25-29' from the Ages Variable, then click on the AND button. Finally, locate and highlight the required income from the Income Variable, then click on the AND button to complete the filter. (For details on how to use "AND", "OR" and "NOT", see Understanding AND, OR & NOT on page 29).

2. Optional: The Description field contains the text that will appear in your table, chart and other outputs. Although ASTEROID will automatically populate the Description field, it is recommended that you edit the Description field (click into the field to type a new name) to provide your Entity with a more meaningful name.

3. Optional: The Name field is automatically populated with a unique data name. If you choose to edit this field, the new data name must be 3 to 12 characters long and start with a letter. The data name must also be 'globally unique' to the database, meaning that no two data names (whether for existing Variables, Entities or Groups or for new, ad hoc data items) can be the same.

4. Click OK to complete the new Entity.

Note: The order that the fields on the Private Editor box are completed is not critical. Some users prefer to complete the definition first.

Variables

If you have selected 'Variable' the Private Editor screen is displayed:

If we were looking at 25-34yr old males who belong in different income brackets, our ad hoc Variable might look like this:

25-34yr old males by income [Variable]
      Income bracket A [Group]   *25-34 + male + $35,000 – 39,999*
      Income bracket B [Group]   *25-34 + male + $40,000 – 44,999*
      Income bracket C [Group]   *25-34 + male + $45,000 – 49,999*

Then when you are creating tables, this would allow you to specify all the Groups at once by selecting the Variable, or using some of the Groups only. This behaviour is the same as Variables and Groups that already exist in a Database.

Follow these steps to create a Variable:

1. With the top line highlighted, click next to the icon, under Description, to display a box in which you type a meaningful name for the Variable.

2. Optional: As per the information in 'Entity', change the Data name if required.

3. Click on the Add Group button. A diamond icon with an empty line will be displayed as per the image overleaf.

4. With the line highlighted, create a definition for this first Group – this will automatically populate the Definition area:

To create the example mentioned earlier, locate and double click 'Men' to add it to the Definition field, then locate and highlight '25-34' from the Ages Variable, then click on the AND button. Finally, locate and highlight the required income from the Income Variable, then click on the AND button to complete the definition. (For details on how to use "AND", "OR" and "NOT", see Understanding AND, OR & NOT on page 29).

5. Repeat steps 3 and 4 until you have all the Groups required.

6. For each of the Groups, by default the Description box will display the same as the Definition. It is a good idea to change the default Description to give each Group a meaningful name.

Click in the Description column for the first Group – this will display a box containing the filter. Delete this text and enter the new Group name. For example:

7. Click OK to complete the new Variable.

Note: You can also use the Tab key to move between the Description, Name and Definition areas.

Changing Entities to Groups

You may have an ad hoc Entity, or a number of Entities, which you then decide would be best suited as Groups within an ad hoc Variable.

1. Create a new ad hoc Variable and then click on Add Group.

2. With the empty Group line highlighted, double click the relevant ad hoc Entity. The Description and Definition contained within the ad hoc Entity will be added as the Description and Definition for the new Group.

3. Repeat this process for each of the Entities you wish to add.

Note: You may only delete the original ad hoc Entities (to ensure there is no confusion) if you have created the variable by copying the definitions of the entities instead of selecting them. Warning: You must be careful that the entity is not being used elsewhere.

Classes

If you use a lot of ad hocs, then you may want to add Classes to your Private folder to make them easier to manage. Classes are top-level folders in your data dictionary under which you can group Entities and Variables. They can't be tabulated, they are solely used to manage your ad hocs. Classes can be created by right-mouse clicking on the Private folder and choosing Create Class. Give the Class a Description, and you can either give it a more meaningful Name or accept the system generated Name.

Note: that you can move existing ad hoc Variables or Entities to a Class by clicking on the Variable or Entity and dragging the item into the new Class while in the Private pane only i.e., not while in All Items.

Ad hocs in Hierarchical databases

Any private definition created will retain its natural domain association. This will persist for export/import, and copy/clone.

When you try to combine items from incompatible domains the generated error will be "Definition Invalid (Incompatible Domains)"

Restore Private Dictionary

This action restores the database's private dictionary to the state it was in when the database was opened for the current session i.e., it erases all changes since the session was opened.

Modifying Ad hocs

To edit your ad hoc, right-mouse click on the Variable, Entity or Class and select Edit. You can change the definitions and, in the case of Variables, you can add further Groups.

Cloning (Copying and Pasting) Private Definitions

Cloning of private definitions is, in effect, the ability to copy and paste private definitions. This is valid for Entities or Variables, but not Classes.

The action to Copy a definition places the definition in the clipboard, as standard. However, because entries have to be unique, using the Paste option will invoke the Private Definitions editor and populate the data name fields of the copied entry, with new, unique data names. The user has the option of customising the pasted entry, before confirming.

Deleting Ad hocs

There is also an option on this list to Delete. While the deletion of a Variable or Entity is relatively straight-forward, the ability to delete a Class will depend on whether or not a standard Variable or Entity has been included in that Class.

Exporting and Importing Private Definitions

Export: From within the Private pane of the Data Dictionary, right click on the group, variable, class or whole Private folder that you wish to export and select Export. The default location in which your ASTEROID files are saved will be displayed, but it can be saved in another location of your choice. Type in a name for the file and click Save to save the .prwx file.

Import: From within the Private pane of the Data Dictionary, right click on either the Private folder or the relevant sub-class folder into which the file will be saved, and select Import from File. Locate the .prwx file and click Open. If items are found with duplicate file names an error message will be generated and those items will not be imported. This box is expandable to enable viewing of full messages.

Utilising Grid

Grid lines and Freeze Labels

By default, the Grid view (Grid-V and Grid-H) has no visible grid lines for a cleaner look. Freeze Labels allow the row and column labels to remain visible when scrolling through large tables by default. It is possible to change these settings by going to either the Settings (Task) or Settings (Global) Options menu found in the ASTEROID Application menu, and ticking / un-ticking the relevant boxes.

You can also display the output "Tabs" by checking the "Show Tabs Always" option, this will allow tables exported to Excel to also display a tab. To hide the Tabs simply uncheck this option.

By selecting Show Adjustment Flags indicators will appear on the weighted count to show the values are on a partial sample. For more information see Adjustment Flags.
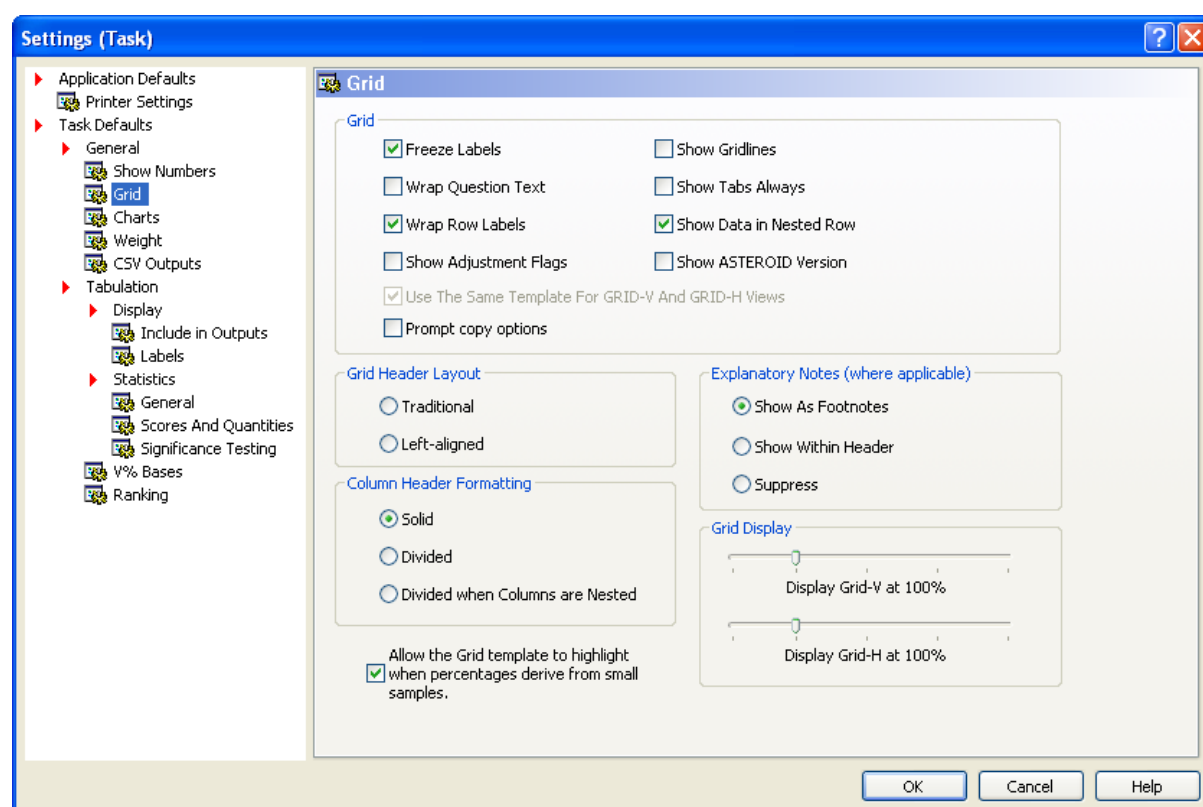
Formatting options

Emphasising figures

ASTEROID provides a default grid view for ease of application. However this may not be suitable for all users. Formatting the grid is therefore an option. An easy way to make tables easier to read, particularly if you mostly look at one or two rows of figures, is to use formatting to make them stand out. For our example we can colour and bold the v% and the index:

Click on the Grid Properties button found on the Grid tab. The Grid Template settings box is then displayed:
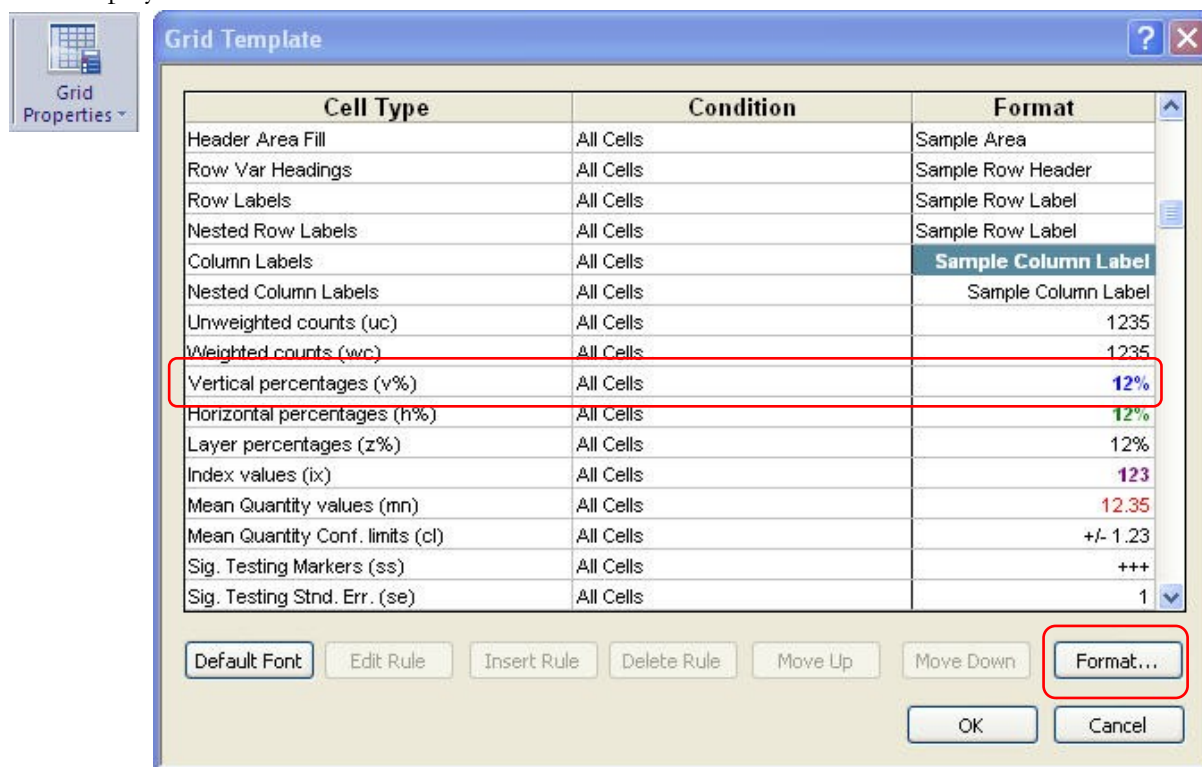
- Click on the Vertical Percentages (v%) Cell Type line;
- Click 'Format…'
- Go to the Font tab (you may have to click between tabs to display all options);
- Select Bold and change the font colour to a bright but readable colour, click OK;
- Select the Index values (ix) Cell Type line and repeat the previous steps to change to colour and bold the font, Click OK.

You will now see that in your table each v% and ix is bold and coloured.

The table below is our mobile phone example with headings, figures and other features formatted to make them stand out.

Note: You can also access Grid Templates through right-mouse clicking anywhere in the table while in either Grid view.

Below is an example of a formatted table.

	A	B	C	D	E	F	G	H	I
1	**ROY MORGAN TRAINING DATABASE - SEP 2009**								
2	Example 2 - Mobile Phones								
3	Filter: TOTAL own or use a mobile phone								
4	Weights: Projected population of Australia 14+ (in '000)								
5	No ranking								
6	Layer: Mainly business								
7									
8					AGE - summary				
9			TOTAL	14-17	18-24	25-34	35-49	50-64	65 and Over
10									
11	(unweighted)	uc	1423	0	14	128	570	626	85
12	(POPN '000)	wc	1473	0	50	233	692	442	55
13		h%	100%	0%	3%	16%	47%	30%	4%
14									
15	SEX								
16									
17	Men	uc	1073	-	9	97	418	478	71
18		wc	1218		43	193	577	358	46
19		v%	83%		86%	83%	83%	81%	84%
20		h%	100%		4%	16%	47%	29%	4%
21		z%	17%		5%	14%	28%	22%	5%
22		ix	100		104	100	101	98	101
23									
24	Women	uc	350	-	5	31	152	148	14
25		wc	254		7	40	115	83	9
26		v%	17%		14%	17%	17%	19%	16%
27		h%	100%		3%	16%	45%	33%	4%
28		z%	3%		1%	3%	5%	5%	1%
29		ix	100		79	100	96	109	95
30									

General formatting

As well as applying formatting to specific elements in a table as discussed above, you can also format individual cells or Groups of cells.

To apply formatting to a single cell or a group of cells, select the cell/s and from the template menu, select Format Cells and choose the desired formatting. You can also right-mouse click over the selected cells and select Format Cells from the pop up menu.

Conditional Formatting

You may create formatted tables based on rules that you specify. When you open the Grid Template settings box and you select a Cell Type line, you will notice that the 'Insert Rule' button is available. By clicking on this button, it displays the various options you can specify:
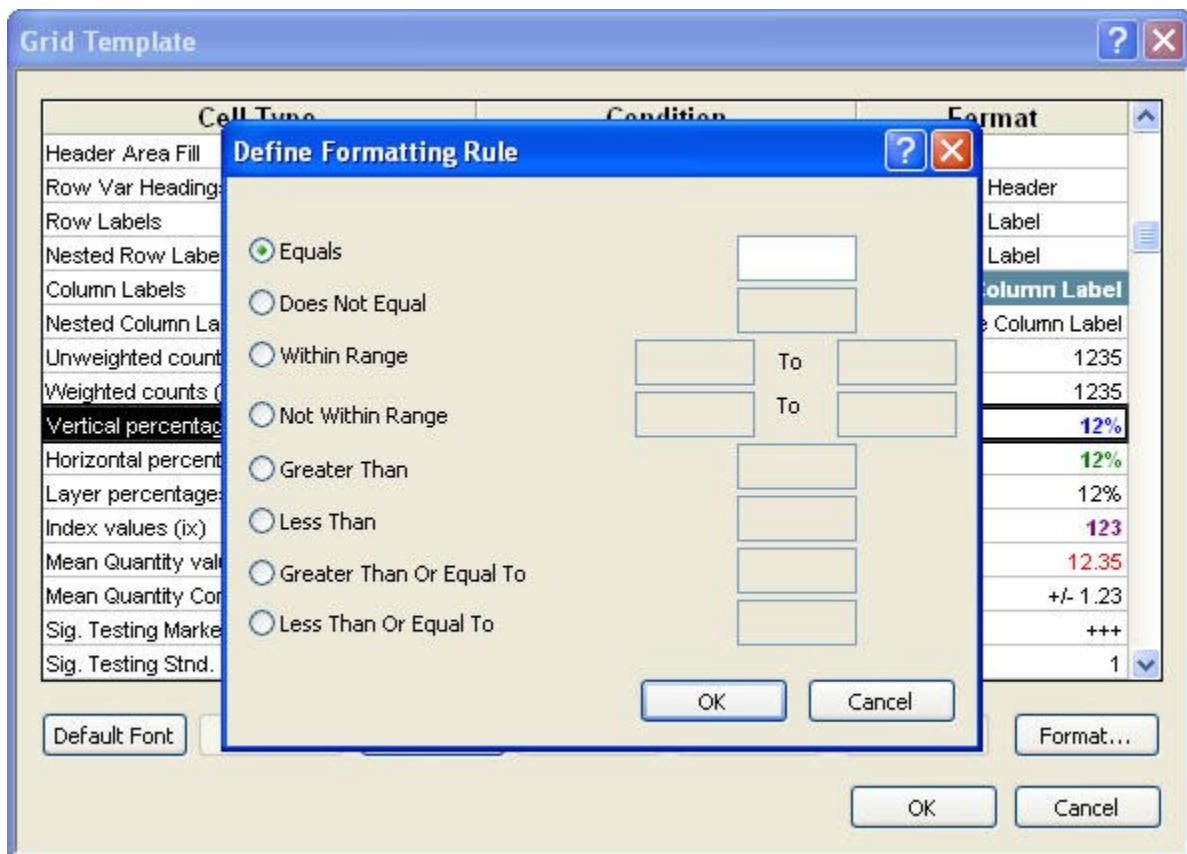
Note: Insert Rule not available for all Cell Type lines.

Grid Templates

Formatting can be saved for future use, or set as the default, through Grid Templates and this allows you to set up templates for doing different types of work (maybe highlighting v% in one template and mean scores in another).

Once you have specified the formatting you want, go to the Grid Properties button and select Save Template… and save the new template with a meaningful name (refer image below left).
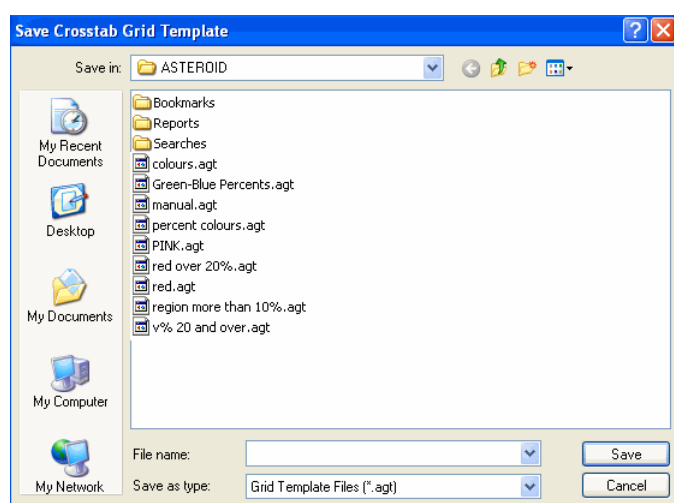
You may apply this template to any other table by choosing Load template via the Grid Properties button located on the Grid tab:
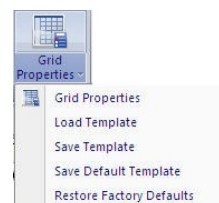
The list of saved templates will be displayed (as per the Save option at left) – simply select the required template and click Open.

Working with other applications

You have a couple of options for working with your tables in other programs. The most obvious one is Copy, but you can also export in three different formats from the Output or Grid tab.

Copy and paste
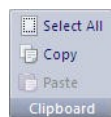
To use the Copy and Paste options, you will use the Clipboard options located on the Home tab. You can select part or all of your table in the same way you would in MS Excel and then copy using the right-click mouse menu, the key board shortcut (Ctrl +C) or by clicking on the Copy icon in the Clipboard section of the Home tab.

Note: when pasting into MS Excel the data pastes in without any formatting. When Pasting into MS Word the data pastes in without any formatting and separated by tab stops (which means it can be easily converted into a Word table if desired).

Saving

The Grid tab provides three options for saving your tables into different formats (under Save Grid button):
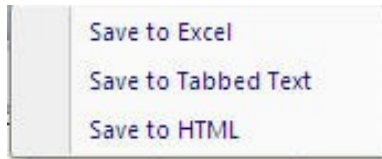
- 'Save to Excel' creates an .xls file including the data and any formatting applied.
- 'Save to Tabbed Text' creates a .txt file suitable for importing into a range of other programs.
- 'Save to HTML' creates an .html file containing the data and any formatting.

Export to Excel and Open CSV File
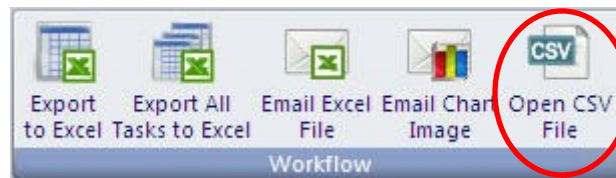
As a default, ASTEROID will generate a set of files in the background – which can be de-selected using the GRID menu under the Task (Settings) option. If the "create CSV file" option is checked, then ASTEROID will create a .CSV file containing that output data for each task during the session. To view this .CSV file, go to the Workflow group on the Output tab and select Open .CSV File. Alternatively, this can be found in the ASTEROID User Directory via Windows Explorer.

The other options available here are:

- Export to Excel – opens the active (open) task on the screen in Excel. This option retains all the formatting of the screen being viewed.

- Export All Tasks to Excel – saves all active (open) tasks in a single Excel Workbook. Each task will be saved as a separate tab within the Excel Workbook.

- Email Excel file – creates an Excel (.xls) file for the active (open) task on the screen and attaches it to an email that is automatically generated using the mail client on your system.

- Email Chart Image – generates a .png image file for the active (open) chart on the screen and attaches it to an email that is automatically generated using the mail client on your system.

Chart

To create a chart it is generally best to first generate your output in a table. This allows you to review your data before creating the chart and also provides access to a number of predefined chart templates designed to simplify construction of your chart. Alternatively, you can go straight to the default chart by clicking on the Chart button on the Output tab. This will also provide access to the chart wizard.
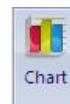
Creating a Chart

ASTEROID provides a default chart design as well as a series of standard chart templates. These formats are for immediate use by simply selecting a design appropriate for the data. Alternatively, a chart wizard will step you through a chart design to suit your needs.

Please note: if you would like your Chart to have a title, you will need to enter the Chart title in the Title field of the Selection screen before running your table.

The default Chart template

The standard default chart in ASTEROID is a horizontal, single-series bar chart, such as the one shown to the right. To apply the default, simply click the Chart button from the Output tab and a horizontal bar chart will be generated for the first series of your data.

The standard default chart displayed may not, however, suit your needs.
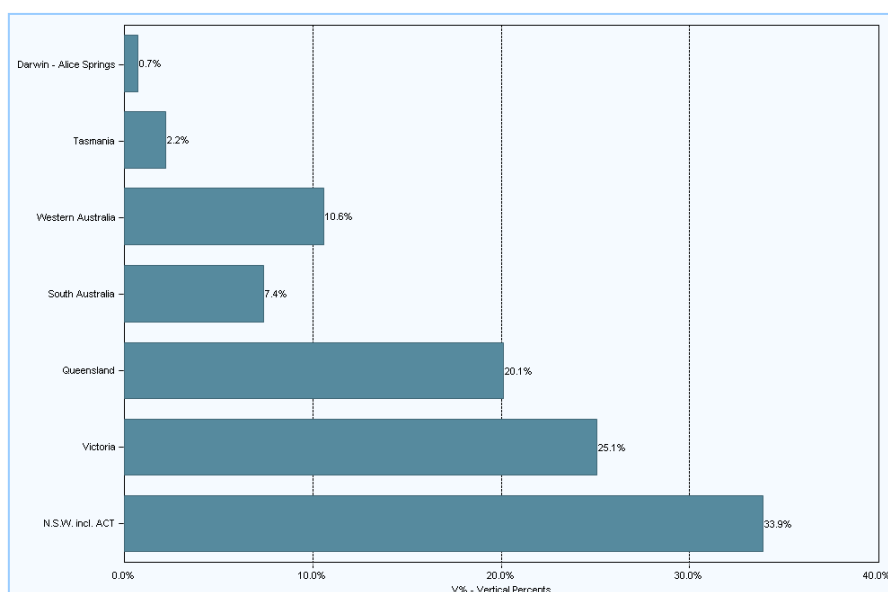
It is possible to modify the design of the chart, choose a different standard chart to be displayed, activate the chart wizard, create custom chart templates or set an alternative chart type or design as your default chart type.   See Modifying the chart (starting page 94) for more details.

Standard chart templates – Standard Charts

ASTEROID provides a range of standard chart templates that are easily selectable via the Chart ribbon.   These charts are grouped by chart type in the Standard Charts section of the Chart ribbon.
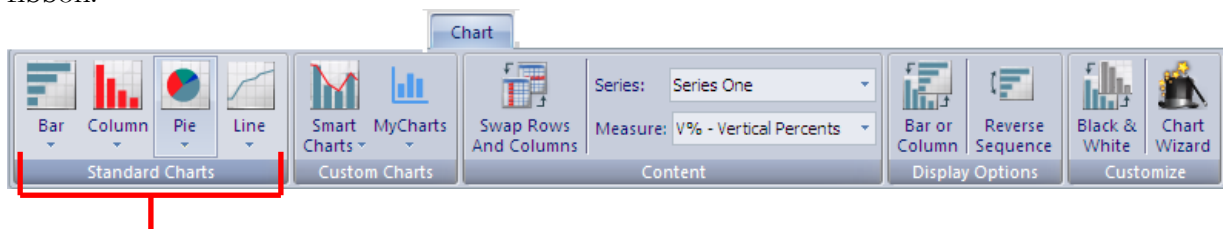
Clicking on the relevant chart category icon will display each of the eight standard Bar chart templates, nine standard Column chart templates, eight standard Pie chart templates and eight standard Line chart templates. The charts available in the Standard Charts section are illustrated below. A single click on any of these chart templates will automatically refresh the chart display with your chosen chart type.
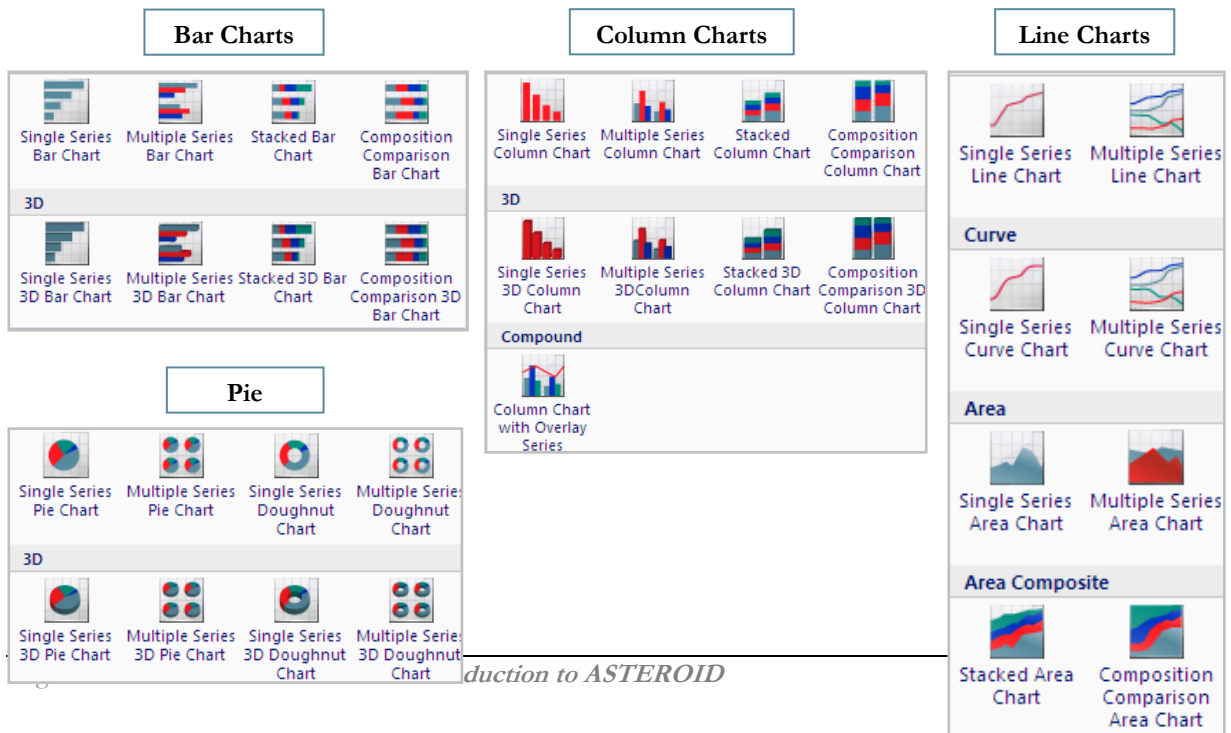
Standard chart templates – Smart Charts

ASTEROID also provides a selection of Smart Charts. These charts can be generated for a data selection by simply clicking on the appropriate icon from the drop-down gallery under Smart Charts.
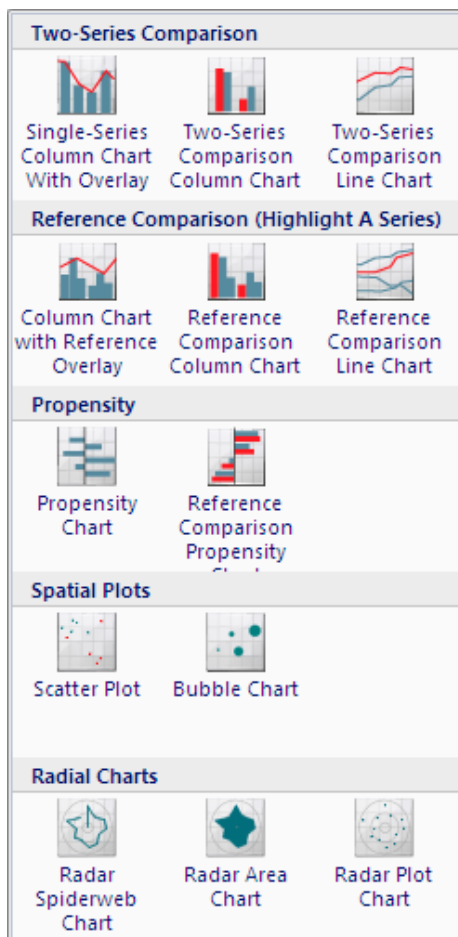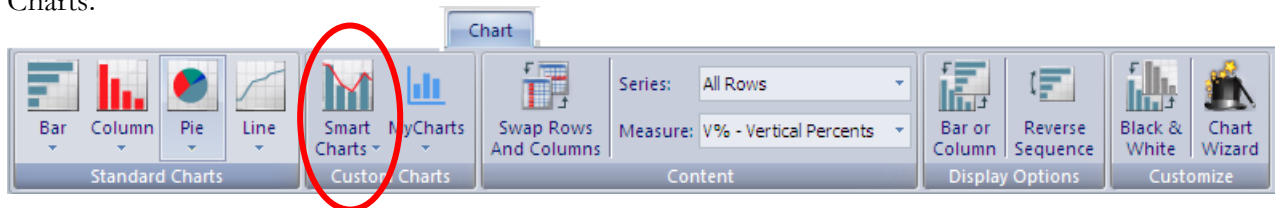
Note*:* it is the responsibility of the user to select an appropriate template to display their analysis. The templates are designed to display data to best advantage but will generate a chart even if the data selection is inappropriate.

Note*:* the range of charts available will update from time to time. Smart Charts will always use V% as a default data element when constructing the chart.

Chart templates may also be selected while still in the Grid output.
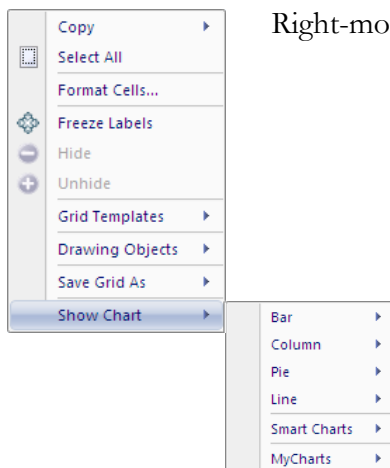
Right-mouse click anywhere on the table area to open a menu box.

Select Show Chart to display a list of the options, as seen on the Ribbon bar.

If previously created, custom designed templates will also display in the list as "MyCharts".

Clicking on the desired chart design will automatically transfer you to the chart view and display the selected chart. You will still be able to modify the chart and its properties after this stage.

Creating a customised Chart Template

Just as it is possible to create report templates and apply them to any tables that you run, you can create and save customised Chart Templates which can then be used to apply your custom settings to any chart you generate. For example, you may want to generate all or most of your charts in a stacked, 3D Column chart format. Additionally, you might want to customise the chart colour scheme to reflect your corporate house style, and ensure all charts are displayed with the Legend Box and data table included.

Saved custom chart templates are accessible via the MyCharts drop-down menu in the Custom Charts section of the Chart ribbon. Because MyCharts contains customised chart templates only, this icon will not be visible until after you have created and saved a customised Chart Template.
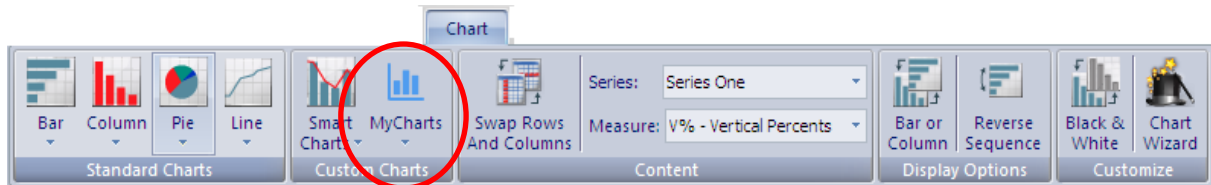
Note: it is possible to create multiple customised Chart Templates, and all such templates will be available for future use via the MyCharts drop-down menu.

To create a customised Chart Template, the first step is to run a table and view the chart. Now modify the chart format and settings until you are satisfied with the result. For detailed information on how to modify your chart, refer to the section Modifying the chart starting on page 94.

Once you have finished customising your chart, it is easy to save the settings and modifications you have applied in a Chart Template. To do this, simply click on the Save button on the embedded toolbar (for more information on the embedded toolbars, see Embedded chart toolbars on page 98). Clicking on this button provides the following options:
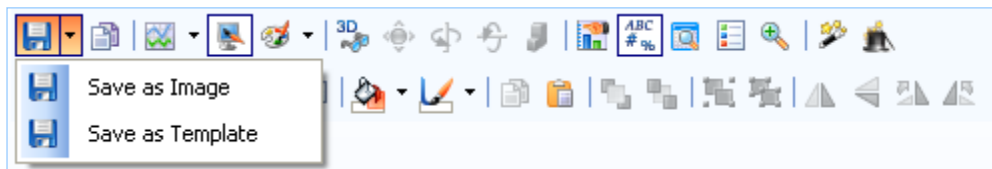
Select 'Save as Template' and enter a meaningful name in the 'Enter template name' box that pops up on the screen. Press the OK button to save. The next time you close ASTEROID, the template will be automatically saved as a .CHT file in the ASTEROID user directory, and your customised template will be available to you the next time you open ASTEROID.
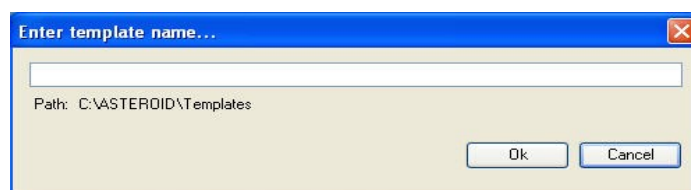
Note: custom Chart Templates will only become available for use via the MyCharts icon on the Chart ribbon once you have closed and re-opened ASTEROID. If you would like to apply the custom chart template settings to new tasks immediately (i.e. without closing and re-opening ASTEROID), you will only be able to do this by selecting your preferred custom Chart Template through the right-click menu on the Grid-V screen, as illustrated below:

In future ASTEROID sessions (i.e. after ASTEROID has been closed and re-opened) simply select your chosen Chart Template from the MyCharts drop-down menu to apply your saved, customised chart settings to your task.

Note: when a Chart Template is saved, it includes all the chart formatting information but does not include anything that is data related. Therefore, information such as data values, the number of series or points, and any of the properties which relate to the data (for example, MultiType settings and Min, Max values in the chart axes) will not be saved as part of your Chart Template.

Modifying the chart

Content Options on the Chart ribbon

The Content section of the chart ribbon provides a number of very useful options for quickly analysing your data in a modified way.
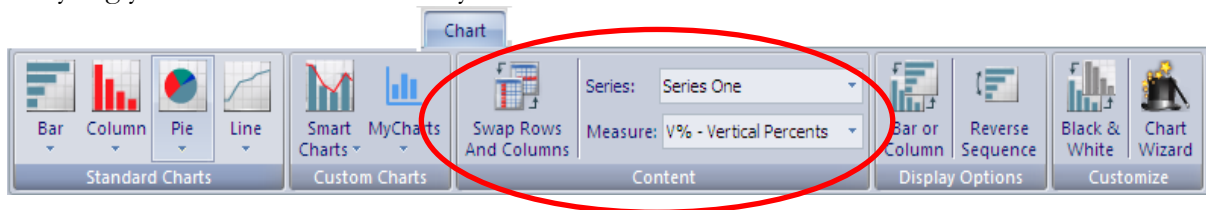
This group of buttons allows the user to quickly select:

- **Swap Rows and Columns:** This allows the user to choose whether the data series displayed in the chart derives from the rows or columns of the grid tabulation;

- **Series:** Clicking on this option allows the user to select which individual series of data should be displayed in the chart. Selecting "All series" here displays all data series listed;

- **Measure:** Allows the user to decide which measure (e.g. V%, WC) to utilise in the chart.

Where a second, or even third, data series selection is relevant, more ribbon groups will be displayed enabling additional selection options. This will be the case where a series is shown on the second Y-axis, or where one series is being highlighted or used as a reference, or for Scatter/Bubble plot charts.

Display Options on the Chart ribbon

The icons (and therefore options) provided in the Display Options section of the chart ribbon will vary depending on the chart type in use. These options allow the user to quickly make important changes to their chart at the click of the mouse. Detailed below are the available options by relevant chart type.
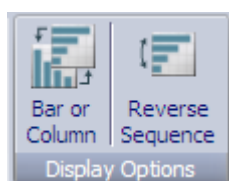
1. **Bar & Column charts:** When a Bar or Column chart is displayed, users may switch between Bar and Column chart format at the click of a button. When a horizontal Bar chart is displayed, users may additionally choose to reverse the sequence of the series at a single click. This option is especially useful when displaying ranked data in a horizontal Bar chart;
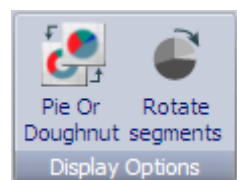
2. **Pie/Doughnut charts:** When a Pie or Doughnut chart type is selected, users can click on an icon in the Display Options section of the ribbon to quickly switch between Pie or Doughnut chart type or to rotate the displayed data segments according to their needs;

3. **Line charts:** If a Line chart is displayed, users can rapidly alter the appearance of their chart by clicking on the Line, Smooth or Stepped icons in the Display Options section of the Chart ribbon.

Customize Options on the Chart ribbon

The icons in the Customize section of the Chart ribbon include the Black & White icon, which converts the chart imagery from a colour palette to monochrome for easy inclusion in black and white documents, and the Chart Wizard (see Chart Wizard on page 97 for more information) which will guide you through each of the steps required to create a chart suitable to your needs.
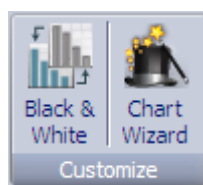
The Chart ribbon therefore provides a number of simple options that allow you to modify your chart at the click of a button, as illustrated below:

Simple chart type selection

Easily change series to be charted. In this example we have switched from "Series One" to "All Rows".

Swap rows and columns with a single click

One-step to reverse the data sequence

Quickly switch between chart types. In this example we have switched from Bar Chart to a Column Chart in one step.
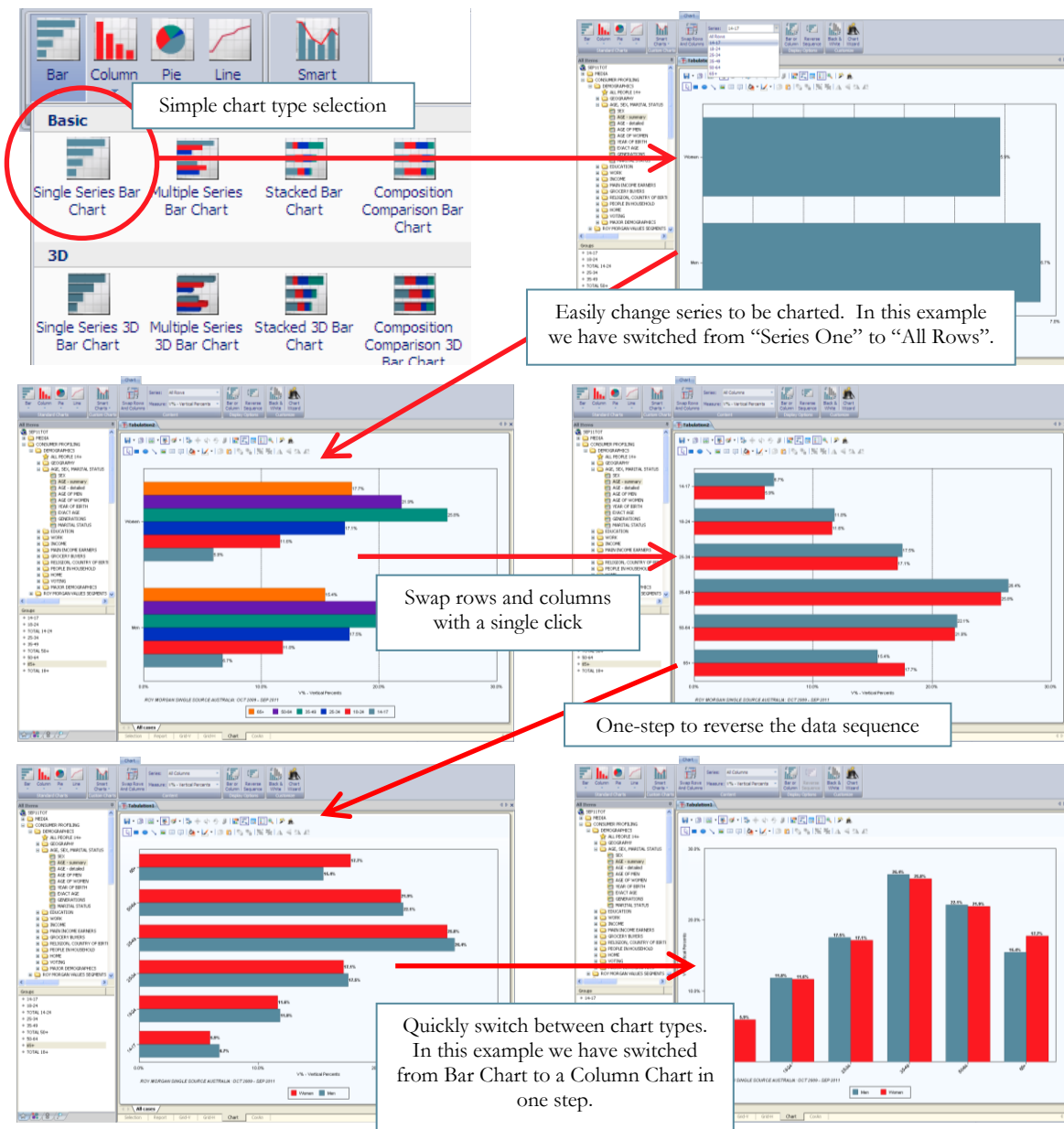
Chart Wizard

In Chart view you can activate the Chart Wizard either by clicking on the Chart Wizard icon in the Chart ribbon or the Chart Wizard icon located in the main embedded chart toolbar (see [Main chart toolbar](#) on page 98). The Chart Wizard will take you through two screens allowing you to select a chart format appropriate for the data and set suitable properties. (For additional information on chart formatting options, see [Formatting the chart](#) on page 100).

As some charts have specific data and format requirements, the Chart Wizard screens may vary slightly depending on the chart style requested. Some of the chart characteristics you can customise in the Chart Wizard include:

- The chart type (choose from the options listed under Gallery);
- To create a stacked Bar or Area chart;
- 3D or Transparency formatting;
- The data source and series to be charted;

- The measure to be charted;
- Whether you want to include Total Column or Base Row in your chart;
- Apply an existing standard or customised chart template.

Embedded chart toolbars
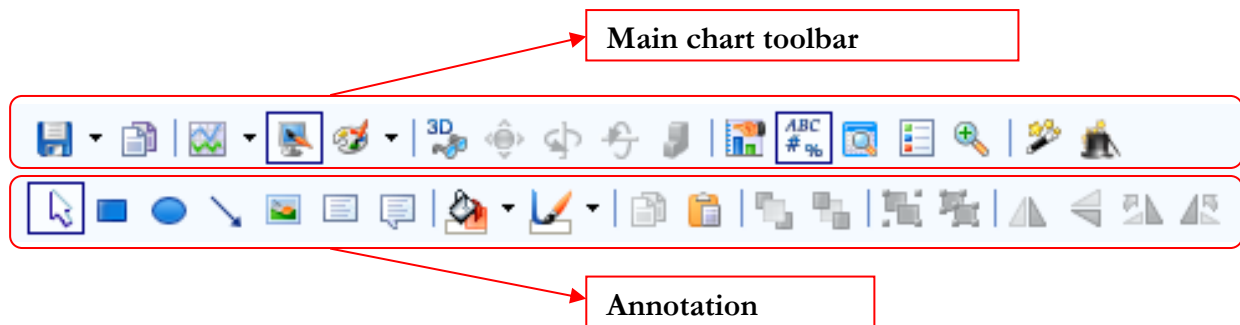
In Chart view, there are two embedded toolbars visible at the top of the chart display. Each of these toolbars contains a range of icons that enable you to modify your chart in various ways. The first of these toolbars is the main chart toolbar (simply referred to as the "Toolbar"), while the second is the Annotation toolbar. You can choose to hide or display each of these toolbars through options available in the right-click mouse menu. For example, if for some reason the Toolbar is not visible on your screen but you would like to display it, simply click the right mouse button while the cursor is over the chart field, then hover over the Toolbars sub-menu and then click on the Toolbar option that appears.

Main chart toolbar

Allows you to alter the properties of the chart, and also access the Chart Wizard.
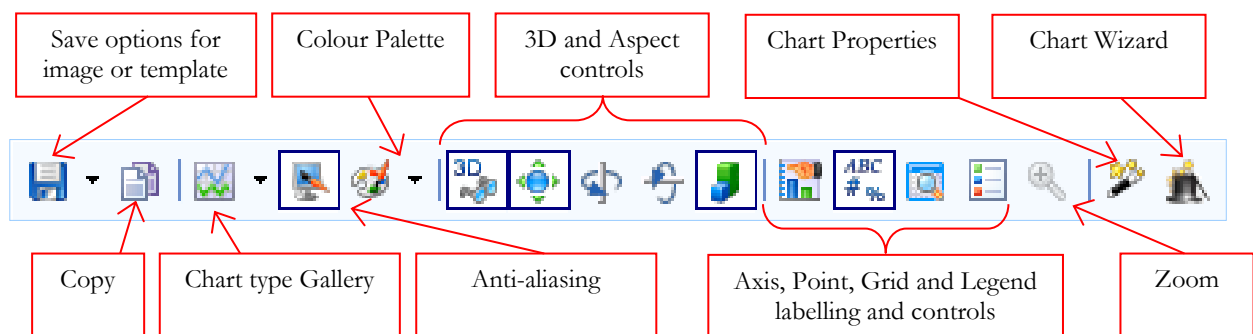
You have a number of menus available on the main toolbar that also provide you with creative options. These are detailed overleaf.

Saving

This button provides two options:

5. save the current chart as an image or picture, or
6. save a template you have designed for future use.

The saved picture format is suitable for insertion into documents created in most other applications.

You can choose to save a formatted chart for future use by saving the template (.cht) file to your user directory (see Creating a customised Chart Template on page 92 for more information).

Copying
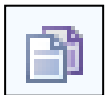
This button gives you the option to copy the chart as a bitmap image or just to copy the underlying data.

Chart type Gallery

This button provides chart style options. The current chart will automatically update when a style is selected. **Note:** the options on this list may change from time to time.

Colour Palette
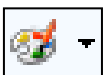
This button allows you to select a pre-set colour series to use on your chart to provide a distinct appearance. (For more information see Colour Palettes on page 105).

Annotation Toolbar
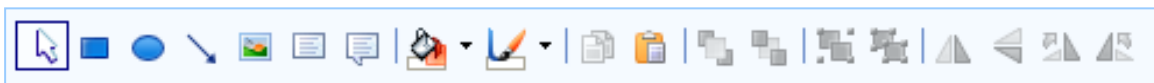
The Annotation Toolbar allows you to add text, arrows or other graphic elements to the chart and provides tools for formatting them.

Formatting the chart

Formatting charts in ASTEROID is very easy, with most options being available through right-mouse click menus, or in toolbars across the top of the chart view:

- Colours can be changed in most cases by right clicking over that part of the chart (e.g. one data series) and selecting one of the options under Colour. In Bar and Column charts, you can choose to change the colour for the entire data series, or change the colour for a single, selected data point on its own.
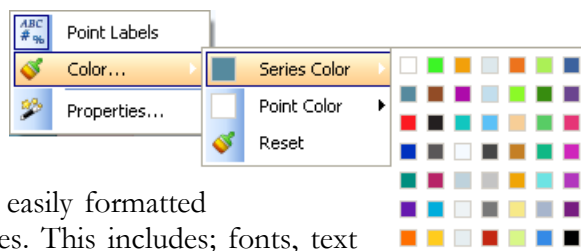
- The axis are easily formatted by right clicking and selecting Properties. This includes; fonts, text alignment, scale and grid lines among other things.

- Likewise you can format the background and individual series through Properties in the right click menu.

- To choose to show/hide data labels, right click on the chart background and choose Point Labels.

  - For line charts, click the Point Labels icon in the toolbar in sequence to choose between all labels, end labels only and no labels;

  - For charts with dynamic highlighting, highlight the series for which point labels are/ are not required, right click and select Point Labels – to replace Point Labels to all series, right click anywhere in the background area of the chart and select Point Labels

- To show/hide the legend, you can use the same right click menu as above, or click on the Legend icon in the main toolbar. When the Legend is displayed, you can right-click over it for more options including where to have the Legend positioned relative to the chart image.

- You can convert an existing chart to another chart type by right clicking over the background and selecting an option from the Gallery.

- To add or edit the chart title, you can right click almost anywhere on the chart and select Edit Title.

The chart toolbars also provides additional features that you can use to quickly alter your chart, including making it 2D/3D, changing the chart type and displaying or hiding items like the legend, grid lines and the Grid table. Moreover, you can access the overall chart properties by clicking the Properties icon on the toolbar. This will give you access to all the properties of the chart, including each data series and Y axis.

Note: to access the properties for the X axis you will need to right-mouse click on the chart in the region of the X axis. Additionally, you can modify the design and look of your chart by selecting individual options found on the toolbars.
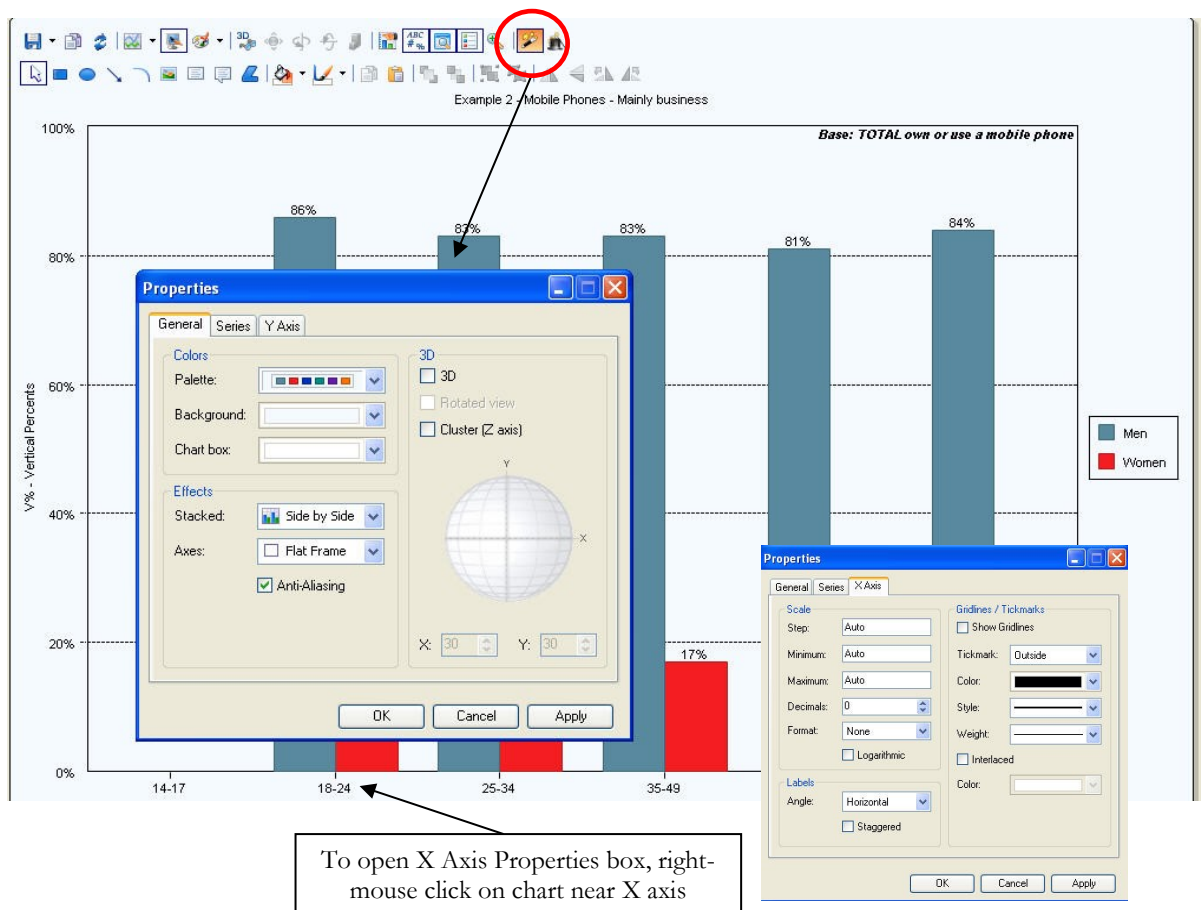
Note: the options available on each of the tabs of the Properties window will vary according to the style of chart selected.

Our formatted chart might look like this:
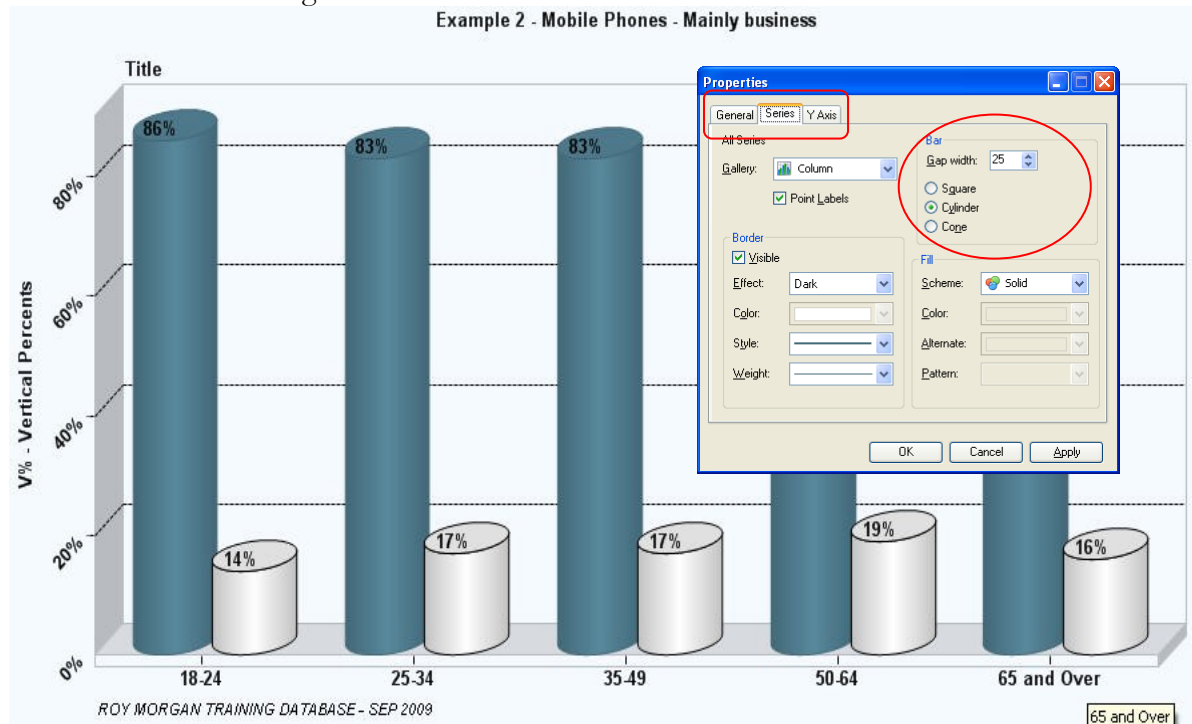
We have altered the colour for the series called "Women", and have selected 3D (from the General Tab) and Cylinder (from the Series Tab) from the Chart Properties.

Once we are happy with the formatting, we can copy the chart to other applications, save it as a bitmap or save the formatting as a template that we can use again later.

Note: If you wish to customise and save a Standard chart template as a custom template there are limitations on the formatting that can be applied – any of the options available in the Charting toolbar (Gallery, Palette, etc – see below) are able to be applied and the chart saved as a custom template. Any other changes – to individual lines, colours, bars, point labels, etc – will not save to a template.

Additional Charting Features

ASTEROID provides a number of enhanced chart features to make interpreting data easier, or as a presentation aid.

Dynamic Highlighting

It is now possible to highlight a chart element to quickly focus attention on a specific series or attribute. This ability allows for easy identification of trends and other elements in your data. This feature allows real-time analysis of the chart output directly from the screen, such as in a demonstration.

Hover the cursor over a chart element to activate the variable element, either an individual element on the chart, or the X Axis label. ASTEROID will highlight the flagged element. By moving the cursor left or right, ASTEROID will dynamically adjust the display.

An information box will also display showing the data makeup of the individual elements flagged by the cursor, e.g. Light spenders 25-34 25.0%.
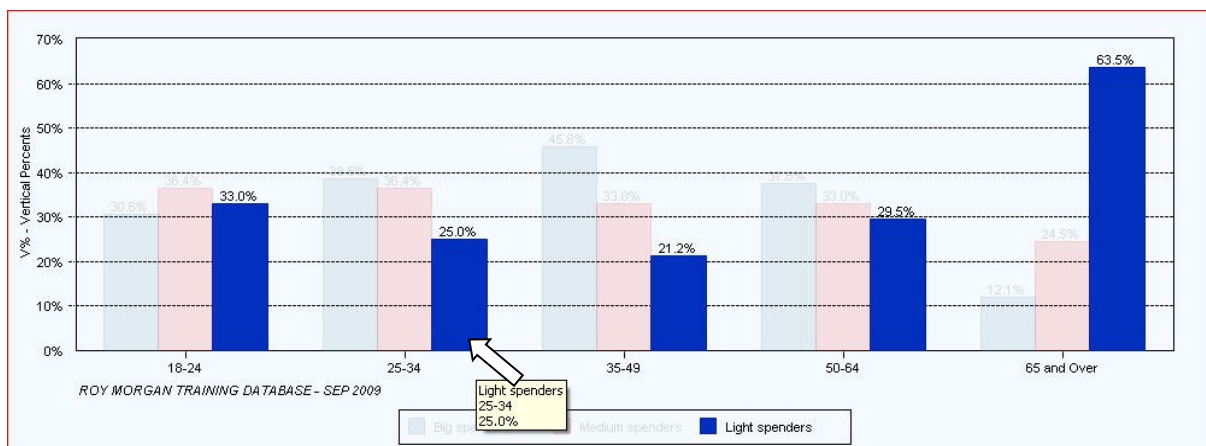
Dynamic filtering

Similar to highlighting trends, by positioning the cursor over a chart Y axis, ASTEROID will activate a dynamic filter that will highlight the value and chart points that plot **above** that specific Y Axis value.

The filter is displayed as a plot line across the chart and will move up or down in line with the cursor. As you move the cursor up or down the axis ASTEROID will reapply the filter and highlight the appropriate data.
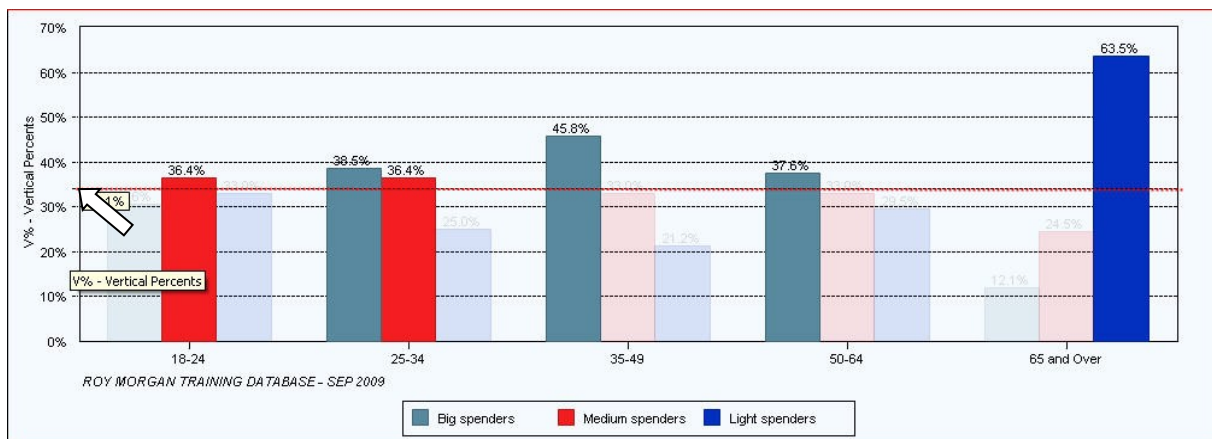
Colour Palettes

ASTEROID gives the user flexibility to customise chart presentations by supplying a series of predefined colour palettes that can be applied generically across the chart series. There is now a new Palette feature which can be accessed via the Palette tool on the Main Charting Toolbar. You can select from the Roy Morgan standard palette, or from a number of alternate palettes.
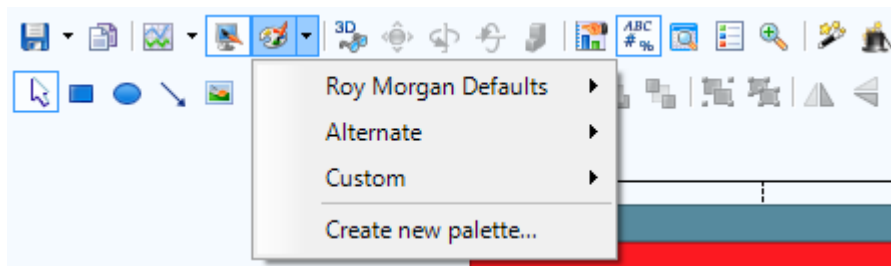
You can also now create a fully individualised custom palette by selecting 'Create new palette' to open the following window:
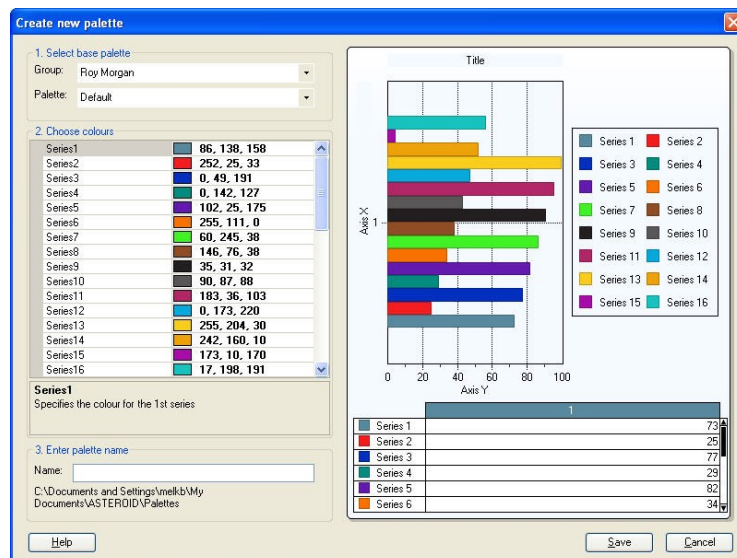
To create your own customised colour palette, step through the following, in order;

1. Select base palette: you can base your custom palette on any of the palettes already available in ASTEROID and make as many alterations as you like.
   a. Group – select from the Roy Morgan, Alternate or previously saved Custom palette groups;
   b. Palette - then select the appropriate palette from that group.

2. Choose colours:
   - **Change a Series colour:** click on the Series line to be changed then click the down arrow at the end of the row to display a selection of custom colours – you can also select from the Web or System colours on the relevant tabs. To add a colour right click in the first white box **after** the colours (i.e., **not** the top white box on the first row) to display the Define colour window, below. Make your selection and click Add colour.
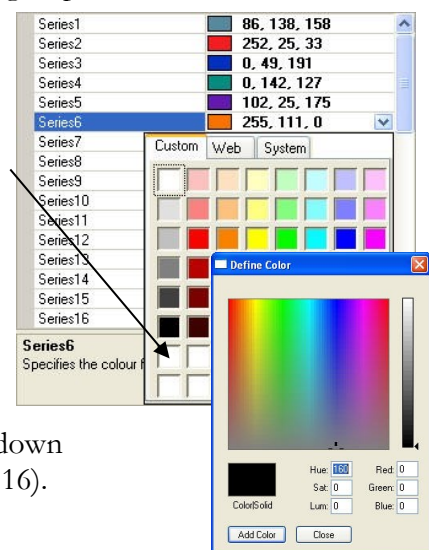
   - **Change Background colour**: use the scroll bar to scroll down past the Series until you come to Background (after Series 16). Select a colour as above.

   - **Gradient background**: if the Alternate background colour is set as a different colour to the Background, the background colour will have a gradient appearance, as illustrated in the image to the right.
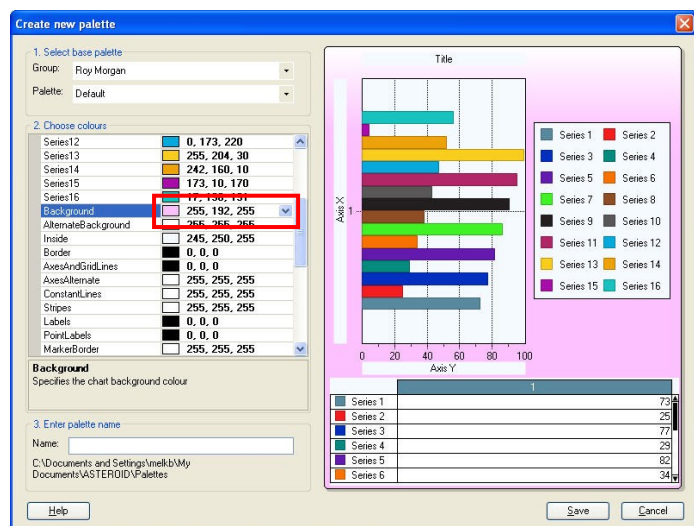
- **Solid background:** Set both the Background and Alternate Background to be the same colour, as below.
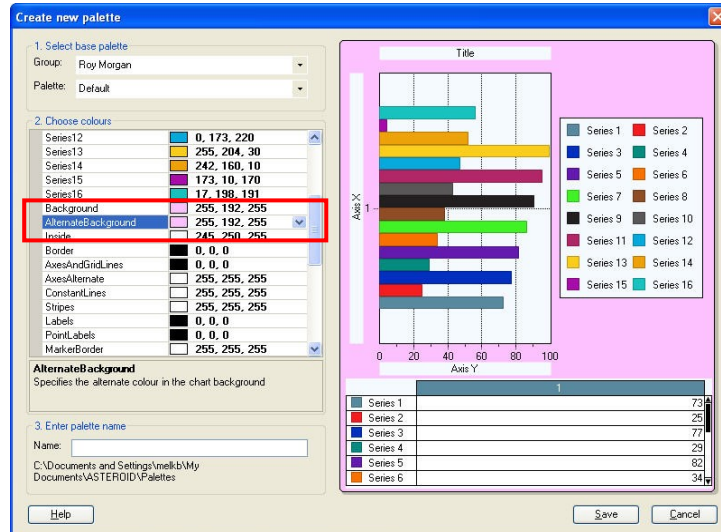
- To have the **Inside background the same as the Background**, set Inside to the same colour as Background, as below.
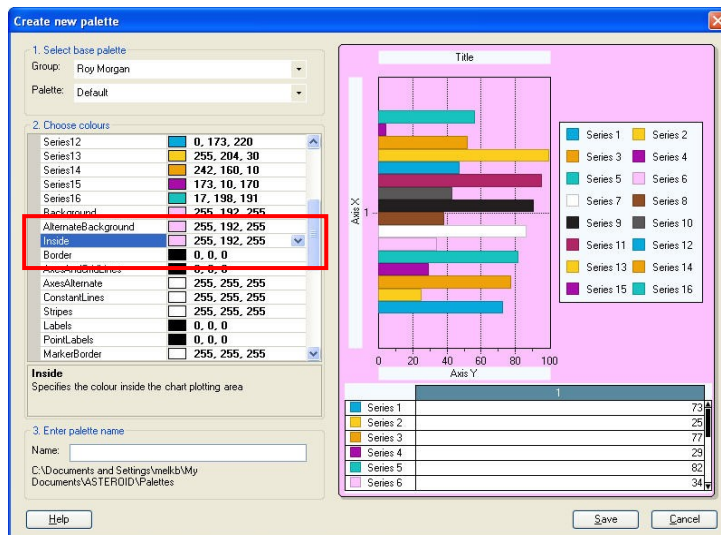
- To apply **the gradient to the inside background** also, set the Inside colour to Transparent, which is available on the Web tab.
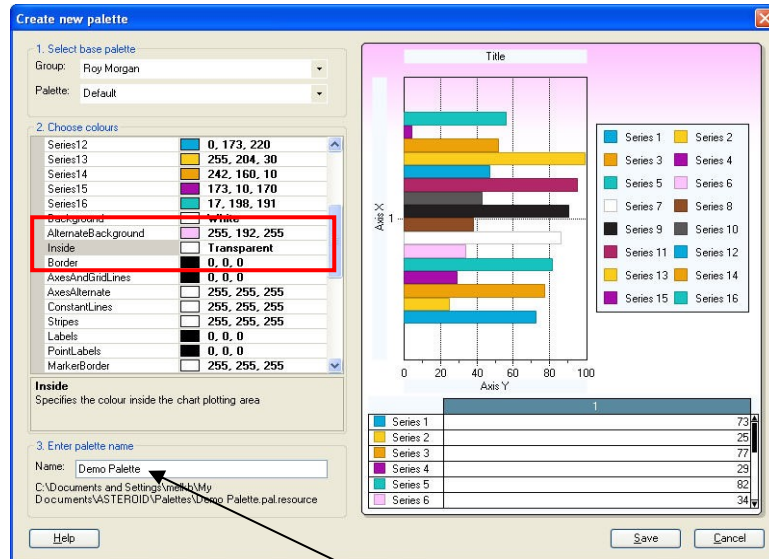
3. Enter palette name: enter a name for the custom palette into the Name text box.

4. When all changes have been made, click Save. This new palette will now be available for selection in the Custom group.
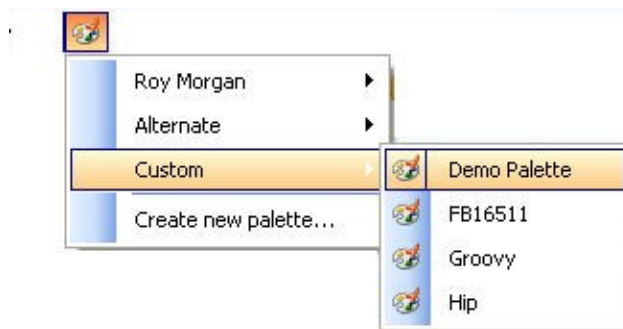
Report Folder

Report Folder provides a way for you to save your analysis as a chart or table for future recall, allowing you to quickly re-run them or share them with other ASTEROID users. A Report Folder also provides a way of keeping related work (e.g. work for a specific project) together.

Note*:*

• You can use a Report Folder to save tables, schedules, charts, diagrams et cetera created using any of the ASTEROID tools such as Tabulation, Profiler, AID or MediaPLANNER.

• Report Folders can themselves contain sub-folders to assist with management of tasks, with a hierarchical view of the contents, such as:
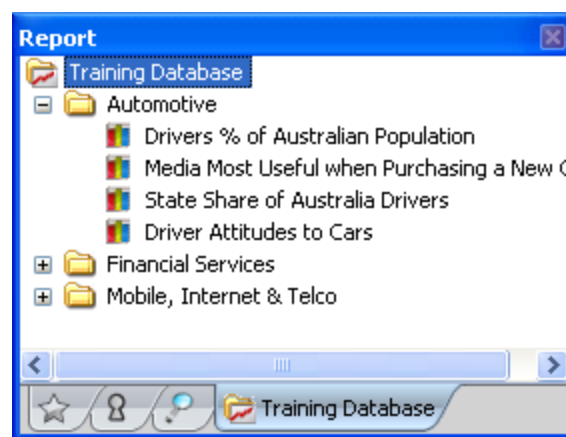
• You can also use the same Report Folder on any database that contains the same data – e.g. if you run the same tables from one quarter to the next then a Report Folder set up using a Q1 database can be used in the Q2 database (as long as all the variables exist in the Q2 database) and so on.

• By telling ASTEROID which template to use for a task you can have individual tables in the Report Folder display differently (e.g. different chart types or grid formats).

• When saving a Chart in the Report Folder, all charting characteristics are automatically saved for future recall – no need to include a chart template in the Report Folder.

The Report Folder ribbon

ASTEROID has an improved Report Folder ribbon:
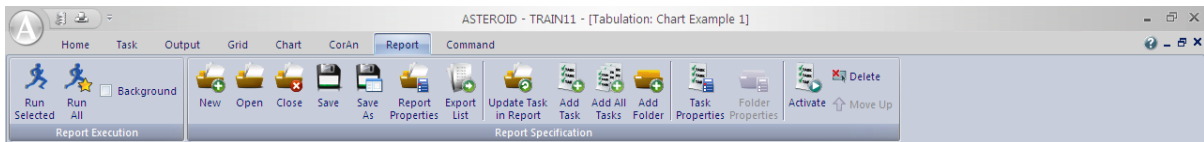
There are two ways to open a Report Folder window:
1. From within the Home ribbon, select the "Open Report Folder" shown here:
2. Click on the Report tab at the top of the ribbon as shown below
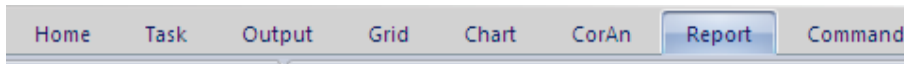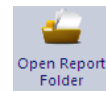
Using the Report Folder ribbon:

a. To create a new report folder, use the New button in the Report ribbon

b. To open an existing Report Folder: use the Open button

The Report Folder will open and be displayed in the left hand pane as shown below.

Working more efficiently with Report Folders:

1. The tasks within the Report folders can now be grouped with sub-folders

2. It is now possible to have multiple Report Folders open at the same time.

3. Tasks and/or folders may be moved around with the drag and drop functionality.

4. All tasks within a sub-folder can be run at once.

5. Each task can be run by double clicking on the task.
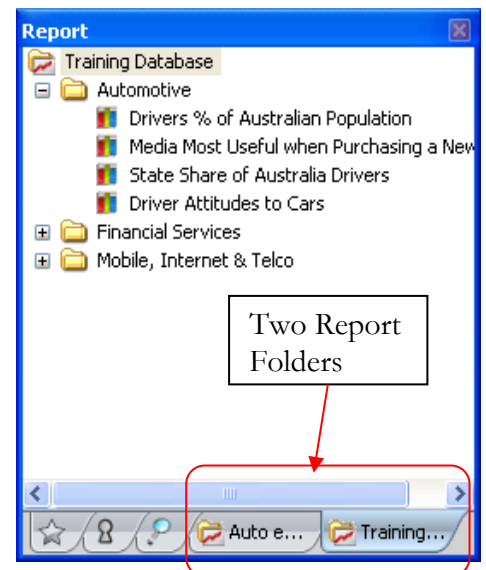
Two Report Folders

Note*:* Each and every Report Folder will remain open and active until you 'Close' the folder.

To make task more identifiable within the Report Folder, ASTEROID now assigns a specific icon for each task type, as shown on the right.
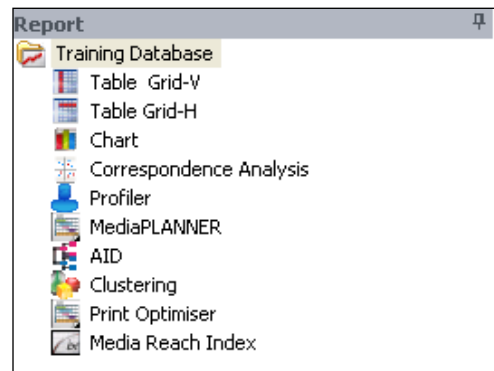
Running Report Folder Tasks

To open an existing Report Folder click the Open button on the toolbar, and browse to and select required ARMX file. Once the Report Folder is open you can choose to run individual tasks by:
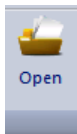
- Double clicking on the Task;
- Opening the right-click menu and selecting "Run";
- Clicking the "Run" button on the ribbon.

If you select to run a task/all tasks within a report folder, and get the message "Some or all items in this task are not valid for this database! The task will be activated for modification, but not run" – this allows you to fix the error and save the task back to the Report Folder for future recall.

Saving changes to a task in Report Folder

After running (or activating) a task from a Report Folder and you make changes, you can now save the changes to the same task with Report Folder by simply clicking on the "Update Report" icon on the Task ribbon as shown below or there is an Update Task in Report located on the Report Bar.
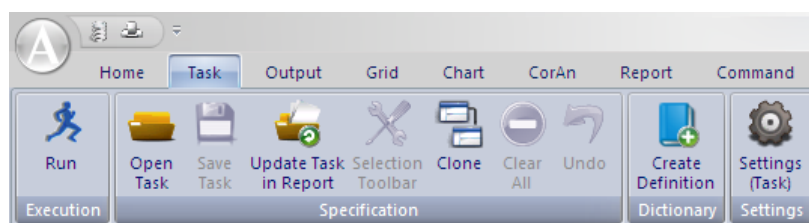
Amending an existing Task within a Report Folder

To change other aspects of a task, such as to display output as Grid-V rather than a Report, or as a Chart, or which template to use, right click over the stored task and select Task Properties. Go to the relevant tab and make the required changes:
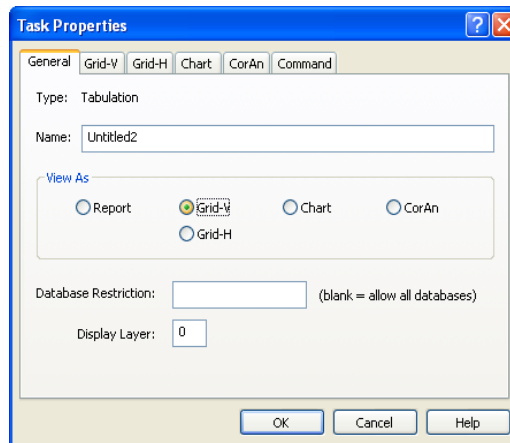
If you wish to change the content of a task within a Report Folder, go back to the Selection pane for that task to make the change and reselect data. For example you may want to update the Month Variable, or add an Age Group. Make the changes required then click the Update Report button on the Task tab to save the report.

Adding to a Report Folder
To add to an existing Report Folder you use Open on the Report tab and select the required Report Folder. Once open you can add a task by clicking the Add Task (or Add All Tasks) button and giving the task a name as described above. Once tasks are added, the Report Folder will be automatically saved.

Saving Report Folder tasks
If auto ave is switched off, then you will have to manually save the Report Folder after adding each task. Failure to do so may result in lost tasks.
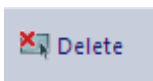
Deleting Report Folder tasks
Single or multiple tasks may be deleted from Report Folders. Click on a report, or click using the Shift key to select consecutive reports, or the CTRL key to make non-consecutive selection, then either right click on one of the selected reports and select Delete or use the Delete button in the Report Specification group on the Report tab (shown at left).

By default, when closing down a session, ASTEROID will prompt you to save any unsaved report entries. However, you may wish to change this default by de-selecting the option found in the Windows Display section of the Setting (Global) menu. To get to this menu please click on the ASTEROID icon found at the top left hand corner of your screen and select Option then Setting (Global) from the right hand pane.
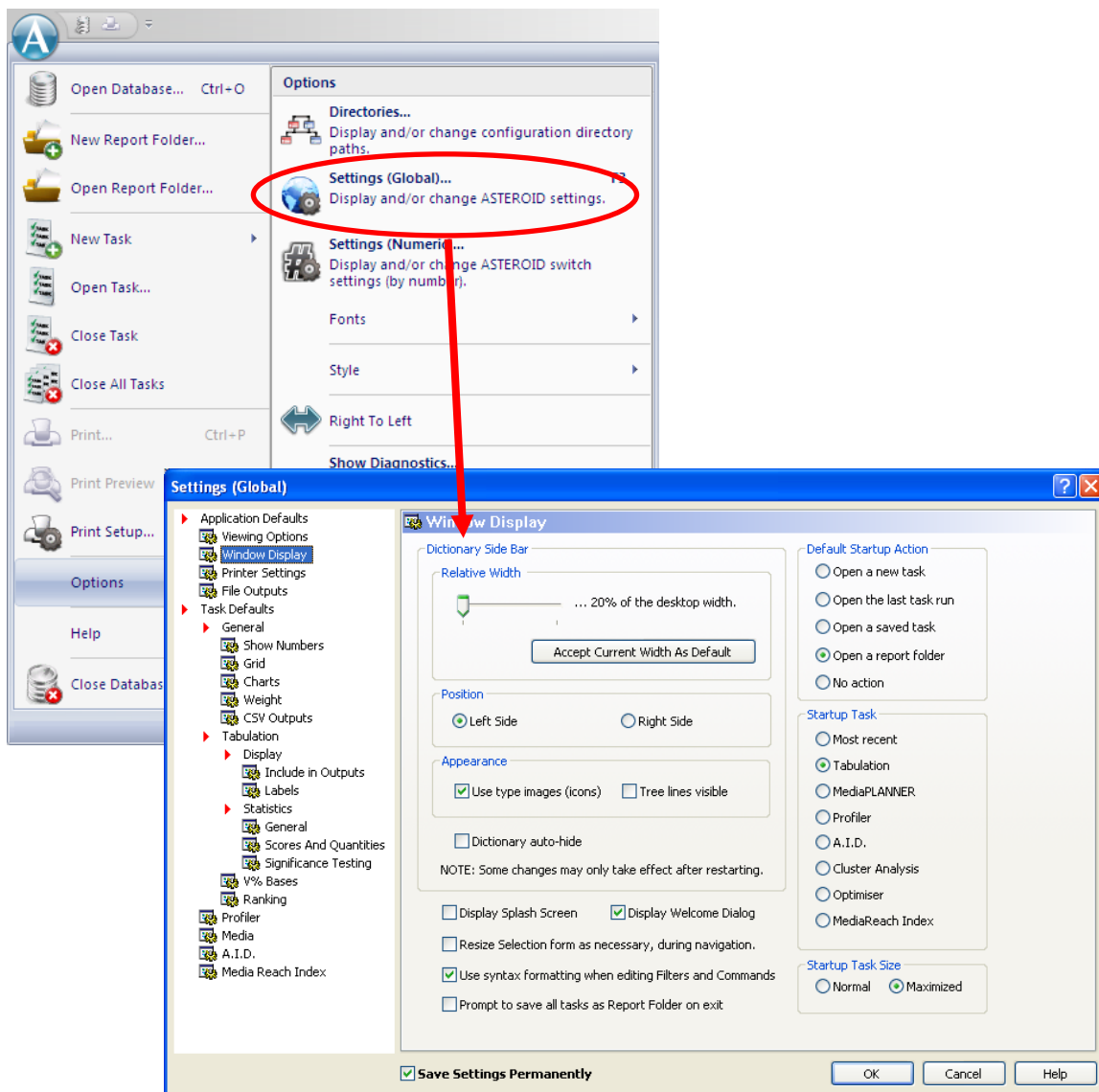
Creating a Report Folder

You can create a Report Folder either before or after you run a task that you want to save. Here, we will assume you have already run a table.

Clicking the Report button will display the Report Folder ribbon
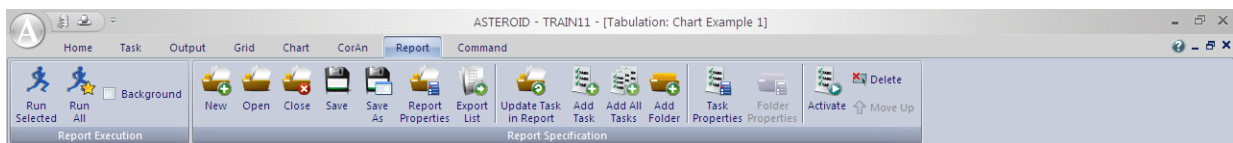
From here, click the "New" button and you will be prompted give the new folder a name:

You also have the opportunity to save all the Report Folder tasks into a single Excel Workbook with every task placed in individual TABs. To do this, simply provide a meaningful name for the Workbook in the field "Save All as Excel".

To add the task you have run to your Report Folder, click the "Add Task" button on the ribbon. The Task Properties window will open (see overleaf) prompting you to name the task. Through this window you can select whether you wish to have the task open in Report, Grid or Chart view and you can specify which layer to display on a layered table. You can also restrict the use of each Report Folder task to a specific database if appropriate. **Note:** This step will not happen when using the Add All Tasks button. The tasks will all be added to the folder, but their properties will have to be modified individually.

For a tabulation, six (6) tabs appear in Task Properties dialog - General, Grid-V, Grid-H, Chart, CorAn and Command.

The General tab allows you to modify the following:
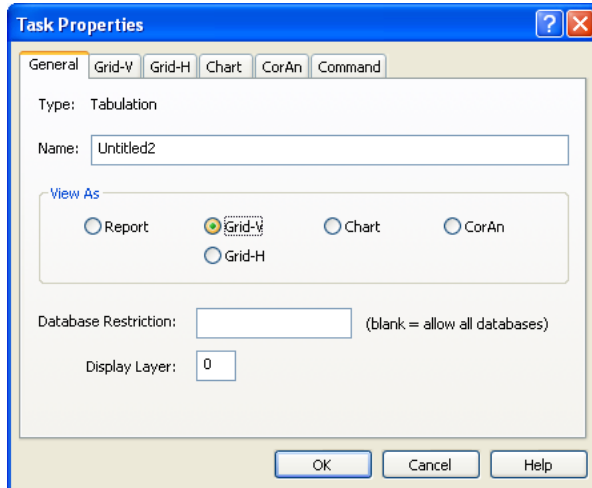
- Name: the name you give the task (this is the name that will appear in the list of tasks within the Report Folder – it will also be reflected on the Task tab once it has been run)

- View As: which view you want the task to appear in when opened: Report, Grid or Chart

- Database Restriction: task will only run in the specified database

- Display Layer: for a layered table it automatically displays the specified layer.

The Grid and Chart tabs allow you to:
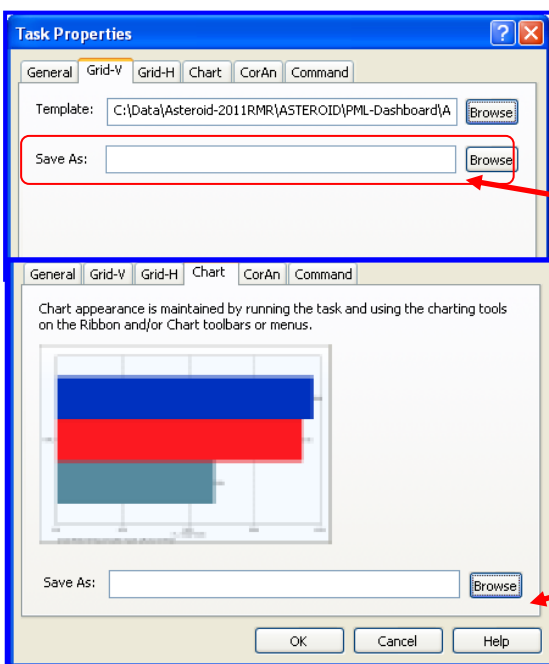
- Specify a grid version and/or chart template ensuring that this particular task will be displayed using that template.

- Use 'Save As' to create an output file in Excel format for the grid output, allowing you to set up linked reports (see Linked Reports on page 119).

- Please note that all Chart characteristics are now saved as part of the Report Folder.

- The Chart tab also allows you to create an output file for use as an image.
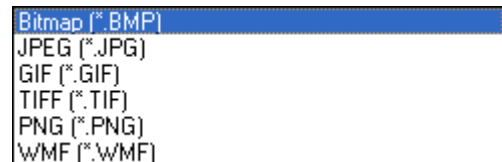
To help you work more efficiently, with ASTEROID Report Folder you can:
- Have multiple Report Folders open simultaneously;
- Create sub-folders within Report Folder to better organise your analysis;
- "Drag & drop" a task to a new location within the same Report Folder;
- Run all tasks within a sub-folder with a single selection;
- Save (add) all active tasks to a Report Folder in one go;
- Export / print the list of tasks in your Report Folder.

The Report Folder (or multiple Report Folders) will now appear as part of the main menu structure as shown below:
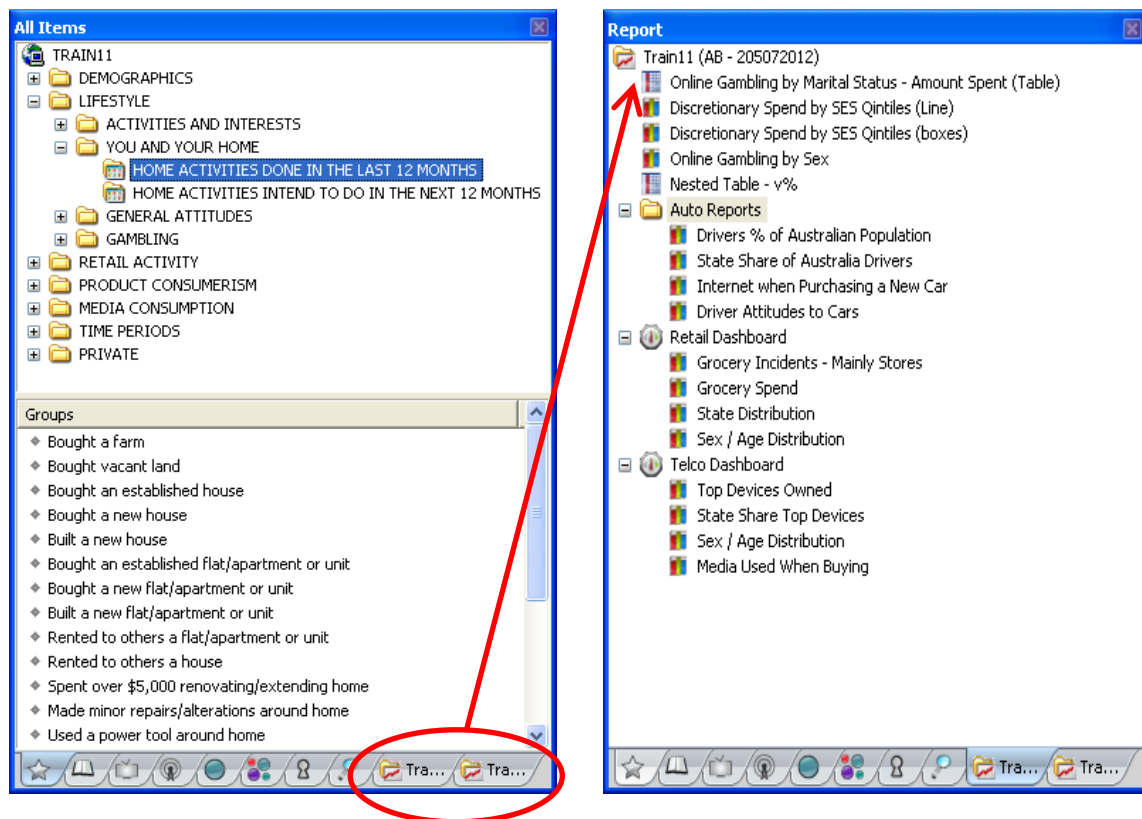
Within the Report Folder each task will be immediately identifiable by their ASTEROID icon as shown on the right.

All tasks saved in a Report Folder can be organised into sub-folders as shown below. To create a sub-folder, simply click on the "Add Folder" icon in the Report ribbon (or select "Add Folder" from the right-click menu when a Report Folder is open and selected). Tasks can also be easily relocated within a Report Folder using the 'drag and drop' functionality.
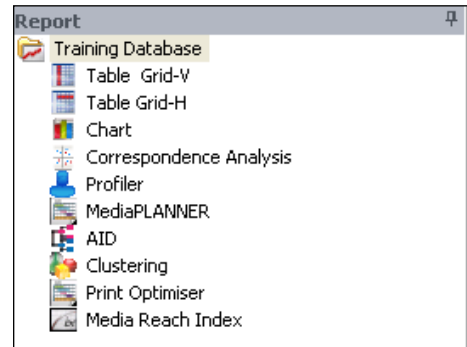
The "Run" command will now run either the individual task selected; multiple tasks selected (use the Shift key to select consecutive tasks or the CTRL key to select non-consecutive tasks; or all tasks within a sub-folder depending on what has been selected.

Organise Reports by grouping tasks in sub-folders. Folders can easily be sorted and arranged due to 'drag and drop' functionality.

Two Report Folders open at the same time
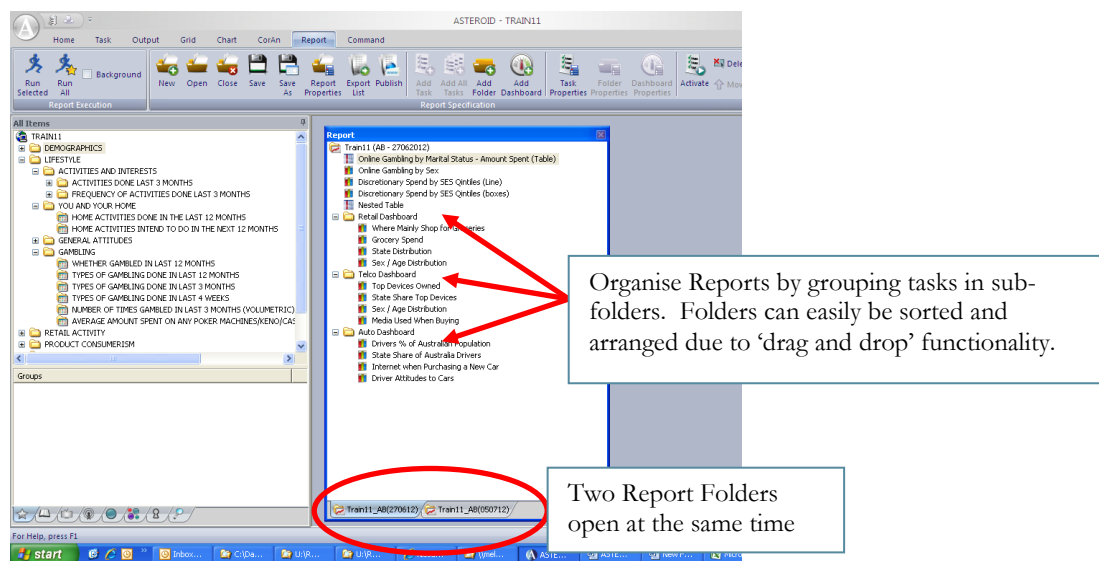
You can continue to run tables/charts and add them to the open Report Folder (showing / hiding the Report Folder window as required). To close an open report folder click the Close button.

To save the Report Folder click the Save As button on the toolbar. You will be prompted where you want to save the Report Folder – by default ASTEROID places it into your user directory (usually on the C: drive) but you can save it anywhere on your PC or network.

Note: When you close the Report Folder, you will be prompted to save changes to the current Report Folder.

Associated with each Report Folder will be any or all of the following files:

- Grid Templates (TemplateName.agt)
- Chart Templates (TemplateName.cht)
- Media Schedule files (*.atm and/or *.ffs)
- Private Dictionary file (*.prw)

To be able to use the ad hoc definitions you create, the PRW file must be kept in the User Directory (usually the C: drive). The template files can be kept in any location, but generally they are also kept in the User Directory.
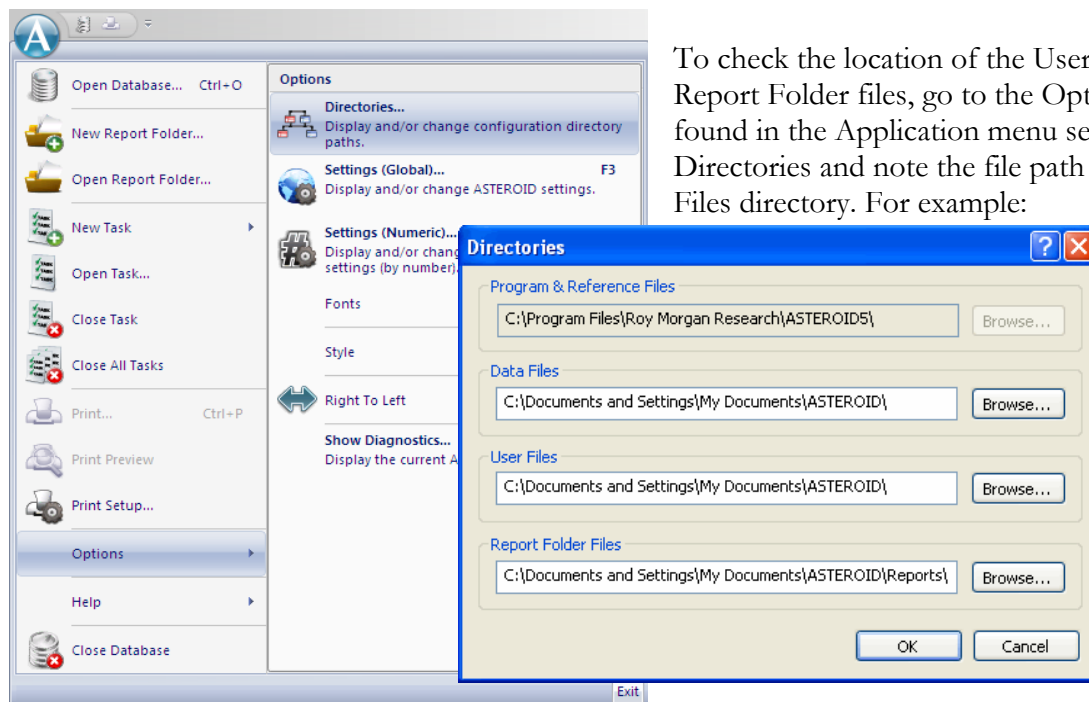
To check the location of the User and Report Folder files, go to the Options menu found in the Application menu select Directories and note the file path of the User Files directory. For example:

Linked Reports

By using the Save As option on the Grid and Chart tabs in Task Properties of your saved table, you can set up linked reports in Microsoft products like Excel, Word and PowerPoint. The Excel files generated from Grid can be paste linked into any of these programs and the .bmp chart output can be linked using insert Object from the Insert menu in Word and PowerPoint.

Activate Task

Another option for viewing a task is to right mouse click on the task name and select Activate. This will open the task in the Selection pane. This option would be useful if it is a large table, which could take time to run, and you want to make changes to the task. You may also want to Activate multiple tasks. Use the Shift key to select consecutive tasks or the CTRL key to select non-consecutive tasks.

Export to File

The context-sensitive menu which is displayed when you right-mouse click on a task in the Report Folder, also gives you the option of 'Export to Text File'. By selecting this option you are given a prompt to save the .txt file somewhere. This file will contain a list of all the tasks within the current Report Folder.
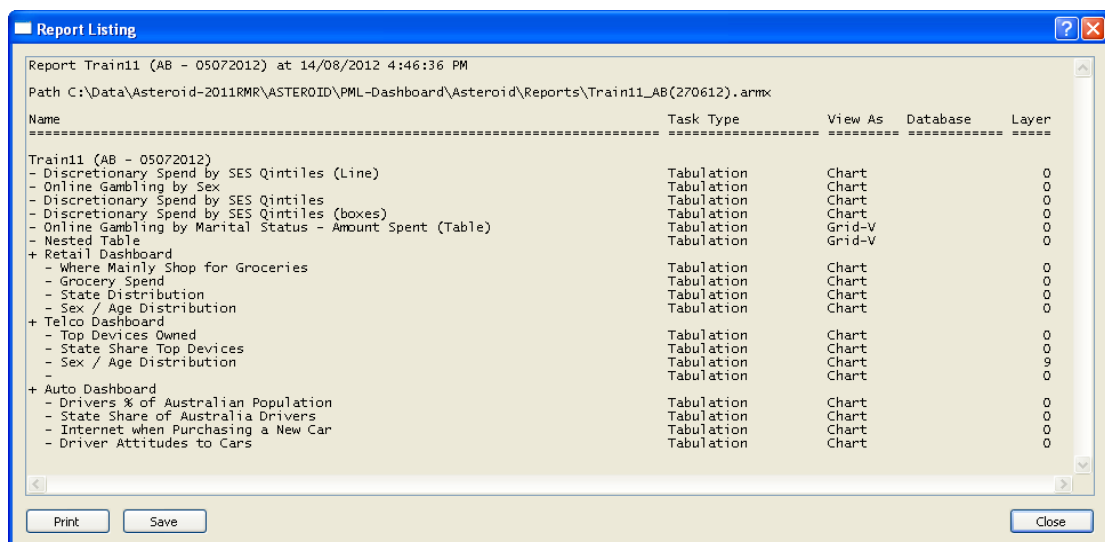
Export Report Folder Tasks to Excel
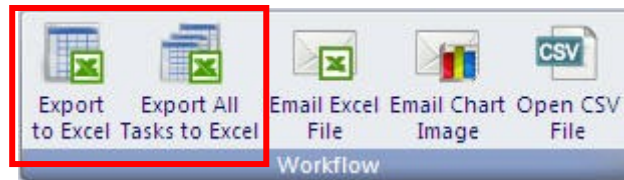
Tasks you wish to export to Excel must first be run, then go to the Output tab and select either the Export to Excel or Export All Tasks to Excel, as appropriate, or you can specific to save them to a single workbook in the Report Properties or on the individual task properties.

Exiting ASTEROID

A final way to save your work into a Report Folder is to say yes to the prompt that appears when you close ASTEROID:
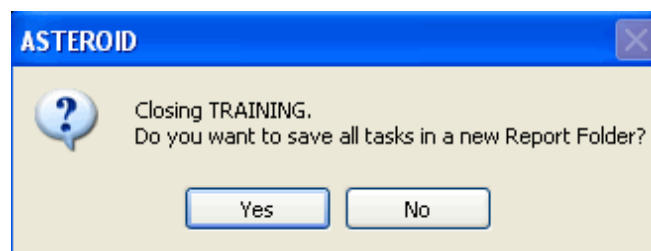
Note: This will only appear if you have specified this in Global Settings (see Global Settings on page 124).

Partial Time Periods

Where research is conducted as a continuous (ongoing) survey, it is normal for some questions to be added or removed over time. For example a January to December database may include results from a question added to the survey in June. The results for this question would usually be weighted to reflect the fact that it was drawn from a part of the total sample (i.e. people interviewed).

This means that weighting would be adjusted to ensure that population projections remain correct. For example, even though this question wasn't asked until halfway through the year, the wc (Weighted Count) will still be based on the whole population, not half the population.

Occasionally such a 'time weighted' item might be included in a filter (or ad hoc). In this case the TOTAL population of the filter or ad hoc Group would be adjusted automatically to that which applied for the time period of the time weighted item. For example, if you are looking at people who buy Fresh brand toothpaste and a new mint variety of Fresh was added in June, then you might create a filter of 'Fresh OR Fresh Mint' customers. When you combine Fresh Mint with Fresh, ASTEROID automatically adjusts the Fresh sample to Jun-Dec only. This is most obvious when you run tables that include time periods, as shown below:

Filter: Fresh or Fresh Mint customers					MONTHS			
		TOTAL	March	April	May	June	July	August
(unweighted)	uc	1390	----	----	----	180	161	145
(Pop'n '000)	wc	943	----	----	----	873	871	1095
	h%	100%	----	----	----	93%	92%	116%
SEX								
Male	uc	137	----	----	----	17	15	13
	wc	92	----	----	----	94	71	105
	v%	9.8%	----	----	----	10.8%	8.2%	9.6%
Female	uc	1299	----	----	----	167	151	137
	wc	883	----	----	----	805	825	1040

So even though the database contains data for Fresh for the whole year, our table only contains data from June. The same will apply when combining items in Private Definitions (ad hocs).
Note: This is controlled by how the database has been set up – ASTEROID recognises the presence of time weighting and adjusts the table accordingly.

Modifying Defaults & Other Settings

Settings

There are two levels of setting in ASTEROID:
1. **Global** – the default settings for all tasks.
2. **Task** – settings specific to the current task.

Here we will look at the general global settings and those specific to Tabulation, Grid, Chart and Report Folders. We will then finish by looking at the Task level settings.

Global settings

Global changes are applied through the Settings (Global) menu found in the Options sub-menu of the ASTEROID Application menu (accessible via the ASTEROID Application button). Changes to the global settings will take effect for all tasks created *after* saving the settings. In the Settings window, the pane on the left of the screen allows you to select the particular settings you wish to change (see image on facing page).

Task settings

Task settings essentially mirror the Global settings. For further information on . Changing Settings (Task) will enact changes in the current active task.

Application Defaults

Viewing Options

This screen enables you to modify:
1. The default view for each task.
2. The Ribbon style.

Settings currently displayed

Save changes – if this box isn't ticked then the changed settings only apply until ASTEROID is closed
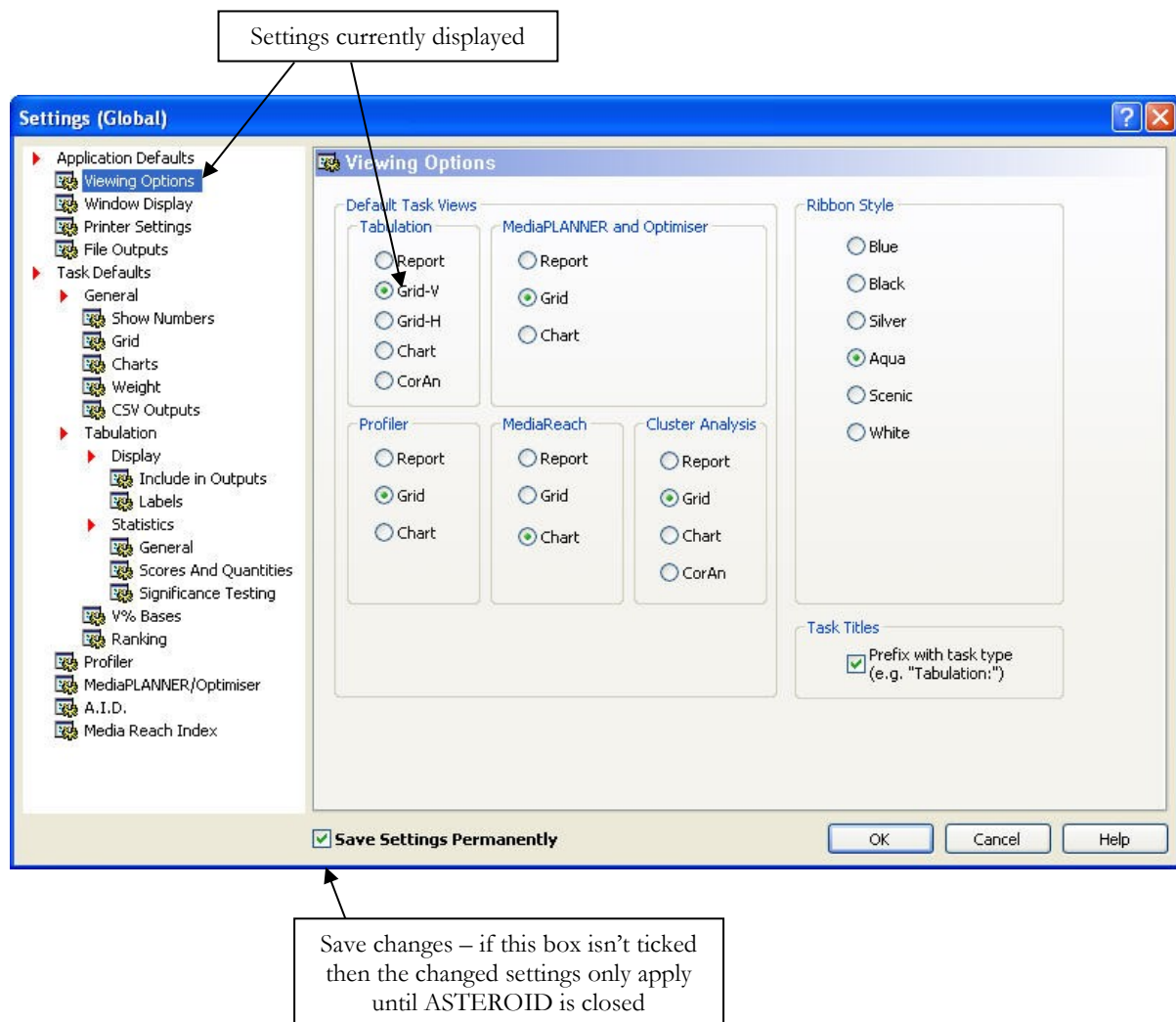
Window Display

Window Display enables you to control the behaviour of the Welcome window and the side panels. You are able to the set the following features:
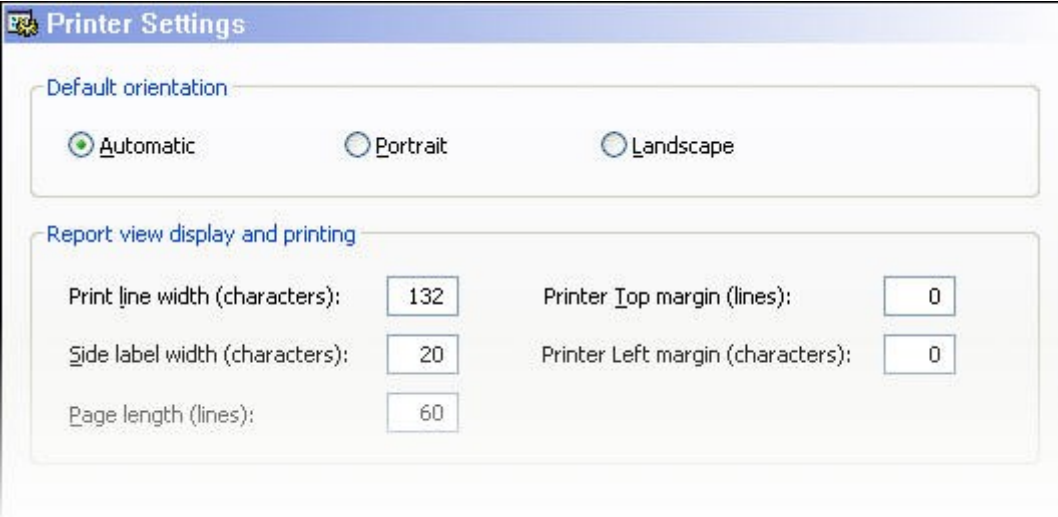
- Data dictionary:
    - The amount of space it uses on the screen.
    - Where to position it (left or right).
    - Use icons or simply +/- symbols like Windows Explorer.
    - Switch tree lines (like Windows Explorer) on/off.
    - Display the dictionary when making task selection but auto-hide it when viewing the results.
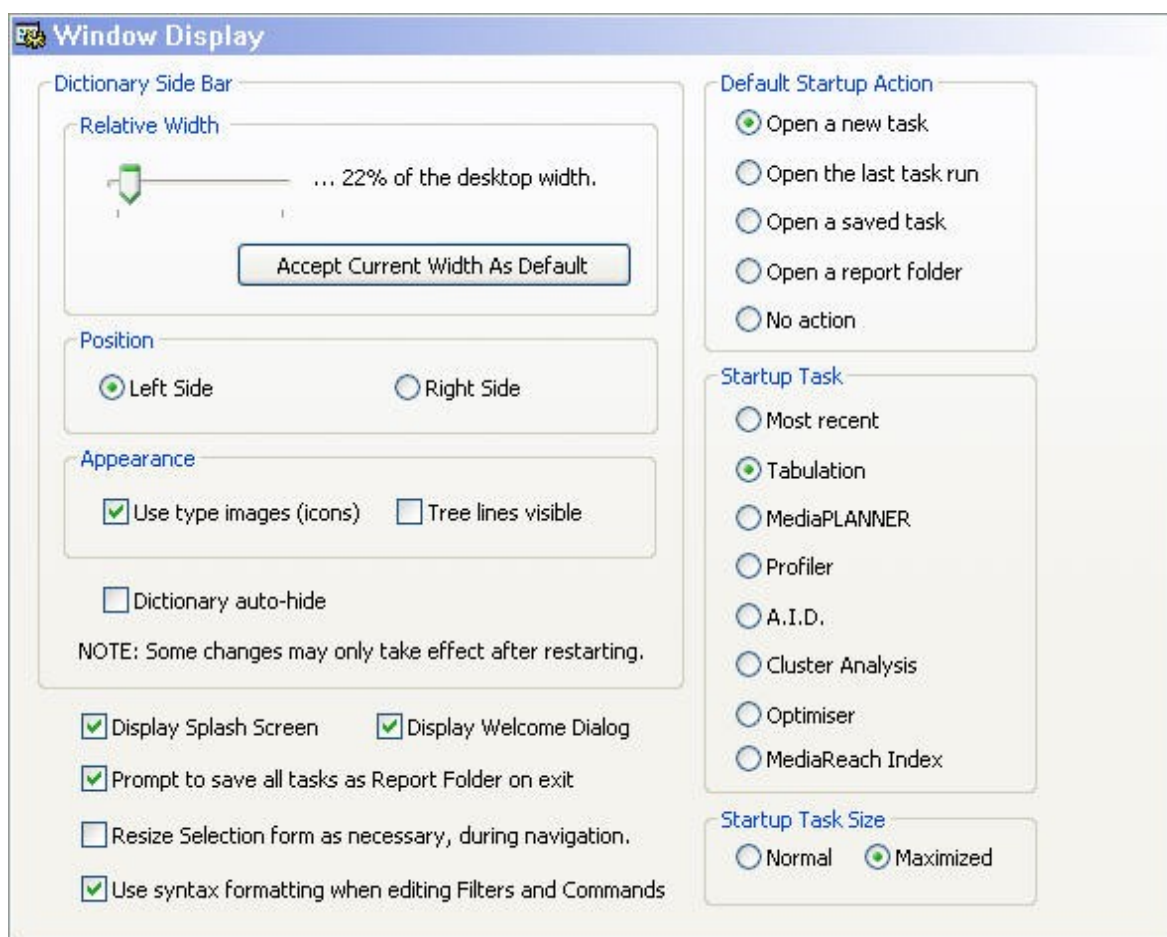
- Determine if you want the ASTEROID splash screen (refer to the image at the front of this booklet) to appear every time you start ASTEROID.
- Switch the Welcome screen on/off.
- Set the prompt to save all tasks as Report Folder on exiting.
- Resize the Selection form as necessary, during navigation.
- Set the use of syntax formatting (auto capitalisation) when editing Filters and Commands.
- Set the size of the window when a task is opened.
- Set the default option on the Welcome screen.

Printer Settings

Allows you to set the print margins and also to select the page orientation.

File Outputs

Includes options to create a number of files automatically while you work within ASTEROID:

Click on **Change Directories** if you need these files to be saved to a location other than the default.

'Use legacy..' option: When creating media tasks (such as MediaPLANNER and Optimiser) selecting this option will mean that .FFS and .OPT files will be created as well as .SPC files. Deselecting this option means that a .SPC file only will be created.

Task Defaults

General Options

Show Numbers

In this screen you can select which figures to show as the default when creating a table. You are able to specify the required number of decimal places (up to three) and which 'Show Numbers' measure to be displayed (i.e., 'uc', 'wc' etc.).

For quantity based information such as "expenditure" you can now display:
- quantified (qwc) – total expenditure
- unquantified (wc) – count of respondents
- quantity medians

Note: The Show Numbers screen will vary according to the task type being run.

Grid

Outlined below are the options for Grid view. In Grid view:

- Freeze labels (the headings in Rows and Columns)
- Wrap the question text in a single cell rather than spanning across the page
- Wrap row label (again within a cell)
- Display or hide the table Grid lines
- Display the 'table tab' at the bottom at all times, or, only when using layers. We recommend you always show the tabs because when you save the table in Excel it will not show any tabs.
- Display nested data when you are running a table with nesting.
- Display an indication that weighted count data is partial sample or partial time period data (Show Adjustment Tags).
- Positioning of Explanatory notes.
- Formatting of 'Look' of the table.

Charts

This screen enables you to define the default chart settings in terms of:

- Chart type e.g. Bar Vertical, Line, etc.
- The default metric to be visible from the list of available metrics to chart.
- Switch on/off the total column.
- Control Aspect ratio when saving charts
- Include Base row in chart
- Set the Point label position for line charts
- Suppress base label – useful if the chart and label overlap – refer below and next page.
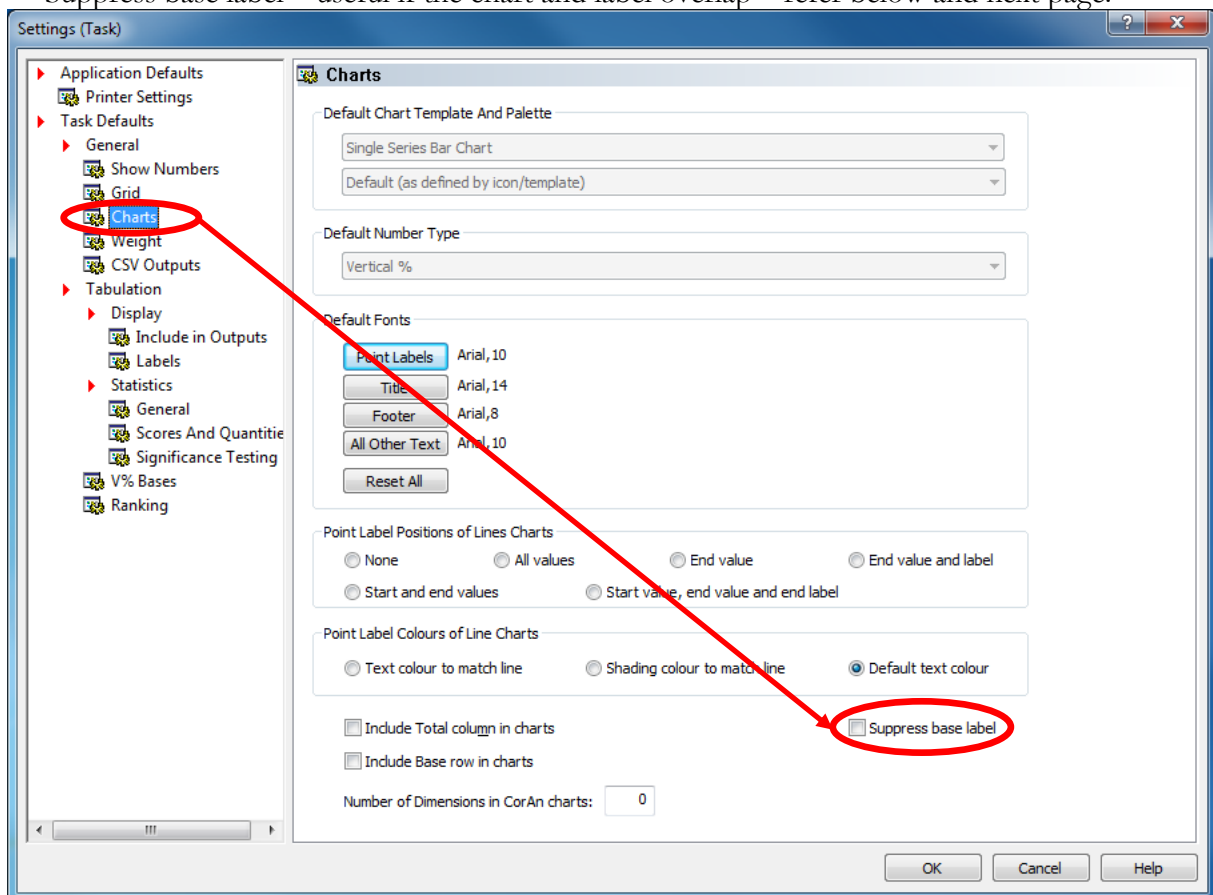
This is particularly useful when the:

Chart title already contains the BASE description.
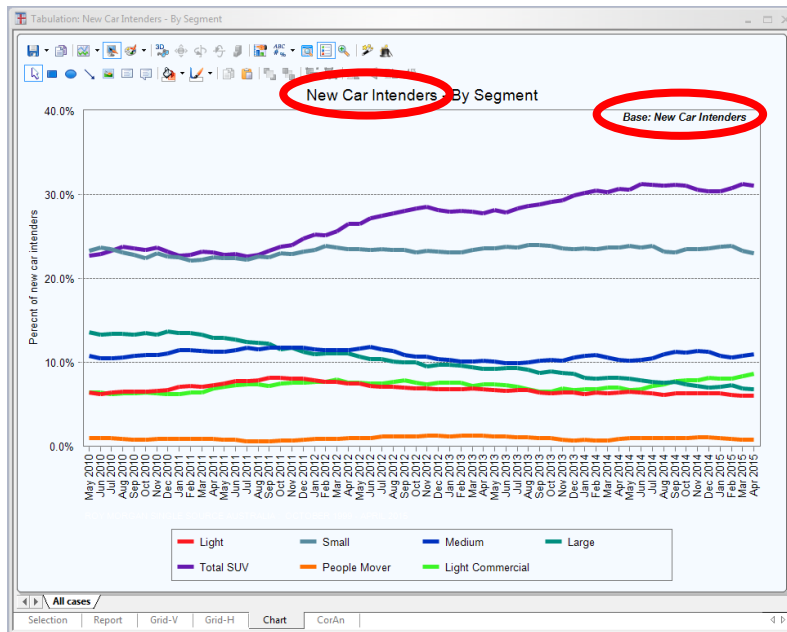
Chart and BASE overlap
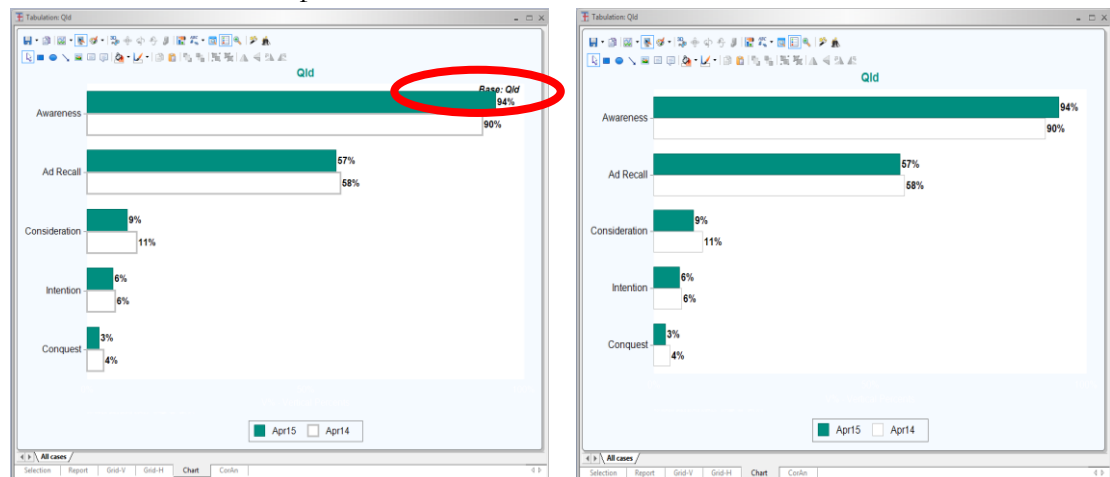
Suppressed BASE description is preserved when the Chart is saved in Report Folder.

Weighting

If your database has more than a single weight set, this screen enables you to switch between sets.

Note: It is recommended that you do not disable the weight sets as you would then be working with raw data.

CSV Outputs

Unless requested otherwise, ASTEROID automatically creates a csv file for each table you run and with these settings you are able to define how these .csv files will appear in Excel (see File Outputs page 128).
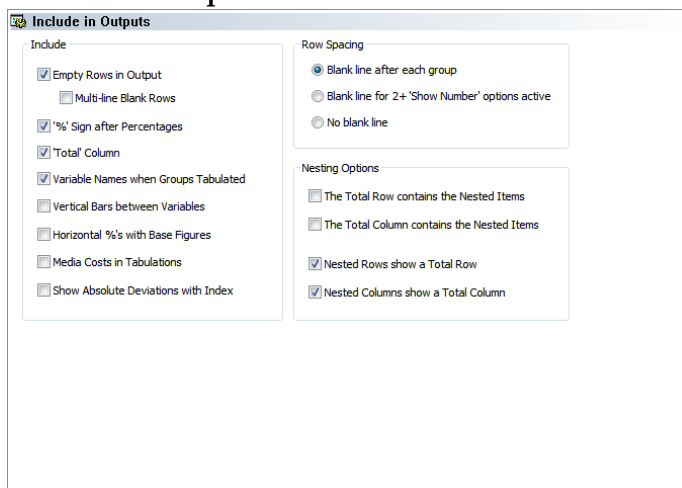
Tabulation Options

Control the appearance and display of tables, and also the application of various statistical tools like Significance Testing.

Display

Settings relating to Tabulation output are spread across two screens covering different aspects of the output.

Include in Outputs

Allows you to specify whether or not to display certain elements in the table (applies to both Report and Grid views).

Note: The Row Spacing options in the lower part of this screen control whether blank rows are included between Groups.

Labels

Here you can specify:
- Whether to display all Variable names.
- Where to position the question text.
- Whether to abbreviate the column and row labels.

Statistics

Please see the Statistical Analysis manual for details of these settings.

General

Weighting and confidence limits.

Scores and Quantities

Mean scores and Quantity bases.

Significance Testing

Significance testing.

V% Bases

Please see the Software Reference Manual for information on 'Base for Vertical %'s', 'Base for Quantity Means' and 'Net Counts for Hierarchical Data'.

For more information on 'Base for Nested Items' please see

Other settings

With the exception of Ranking, which was covered earlier in this manual, all other settings are covered in other manuals in this series.

Task level settings

When you click the Settings (Task) button ASTEROID opens the settings window listing. Only items appropriate to the current task type will be shown. The last setting option in the list will display by default, for example, if you are using a Tabulation task, it will display Ranking as this is the last setting option in the list for Tabulation:
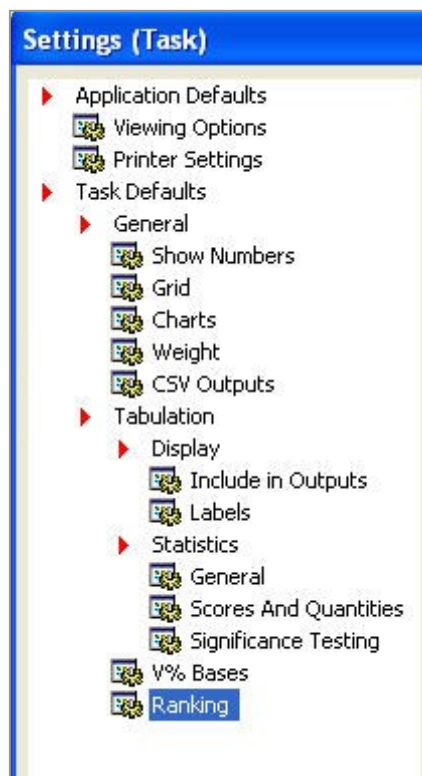
Changes you make here will be applied to the current task only. For example, if you specify 'Show gridlines' and run a table, the gridlines will be displayed on this table. However if you then create and run a new table, the gridlines will not be displayed.

Help Menu

Software Help

ASTEROID provides an online software help service that can be accessed via either the ASTEROID Application button or the Help button in the top right corner. Opening the Help will initiate a search facility and provide detailed explanation of the software and also how to use it.
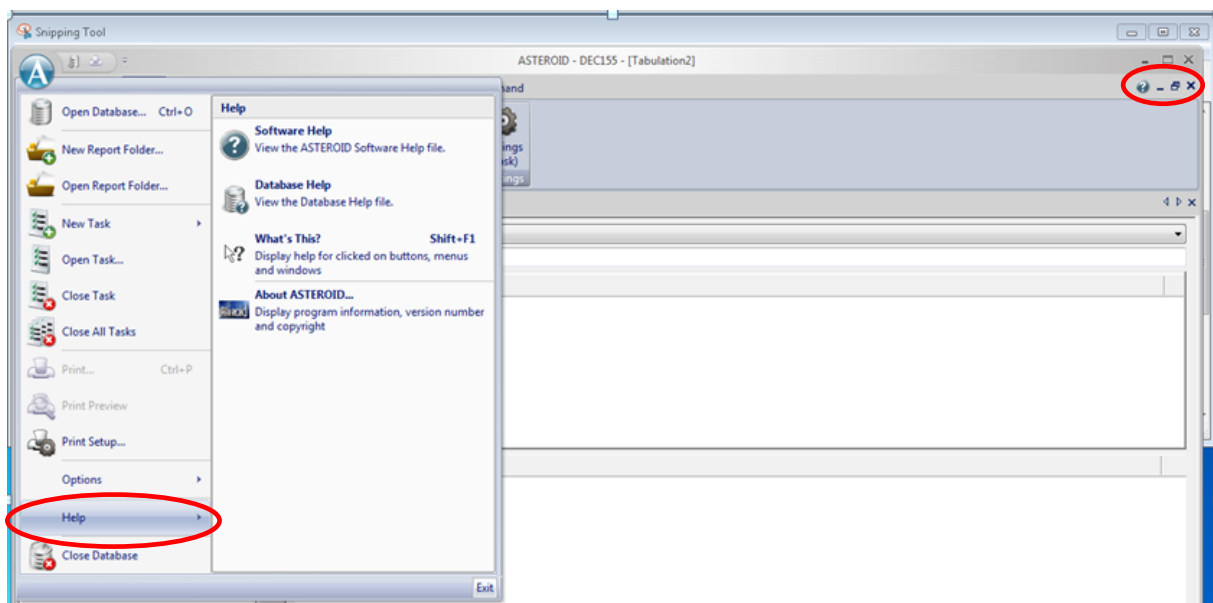
Database Help

Each database may have its own help file with notes and explanations of the content of the database or other background information. If such a file ('*database*.CHM')' or '*database*.PDF') exists for the database currently open it may be viewed and browsed.

What's This?

A slightly different icon with a slightly different function and is mainly available in dialog boxes. Displays help for clicked on buttons, menus and windows. Click on the icon and the black question mark will appear, then click the area for which you need help.

About ASTEROID...

This displays important information about the current programme, including the version number and the build details and date. You should include this information if reporting a problem. It is in the users' best interest to apply software upgrades as they become available. Updating ASTEROID regularly will mean having access to new features and well benefiting from as any software patches.

The Data Dictionary

The Data Dictionary defines the database and the constituent data 'cases' available in the ASTEROID session and is accessible when a task is initially activated. In ASTEROID databases, data is identified as classes, variables, groups and entities. Briefly and in general:

| Icon	Name	Description
	Class	A collection of (usually related) variables. Classes are used to make it easier to navigate through long dictionaries, and are not selectable for analysis.
	Quantity	Indicates a 'quantity' to be associated with each case, which is accumulated rather than just counting the (weighted) cases. It is not a subset of the sample. Only in databases with Quantities.
	Entity	A stand-alone subset of the cases defined without reference to any variable.
	Variable	A characteristic possessed in different ways or to different extent by different cases. E.g. 'Age', 'Pet ownership', 'Marital Status', etc.
	Grid Variable	A grid variable defines both columns and rows of the table.
	Group	A subset of cases, other than the special categories defined below, having a particular value of a characteristic. E.g. 'over 50', 'dog owner', 'Single/Not Married', etc. It may be considered as a category of a variable, or as a range of values of a variable.
	Print Item	Schedulable Print item within MediaPLANNER. Only in Media databases.
	TV Item	Schedulable TV item within MediaPLANNER. Only in Media databases.
	Radio Item	Schedulable Radio item within MediaPLANNER. Only in Media databases.
	Cinema Item	Schedulable Cinema item within MediaPLANNER. Only in Media databases.
	Website Item	Schedulable Website/Internet item within MediaPLANNER. Only in Media databases.
	Internal Base	A variable, or part of a variable, may be 'governed' by a base other than the base applied to the entire table. E.g. 'Electors' will yield only people registered to vote in Australia. Internal bases act in addition to the table filter. With Internal Bases, the v%'s of subsequent groups are referencing the base, rather than the table filter.
	Quantified item	Indicates a Group, Entity or Internal Base that will return a quantified result. In this instance shown, the quantified item is a Group (note the icon is actually a combination of the 'group' and 'quantities' icons).

Dictionary Item Properties
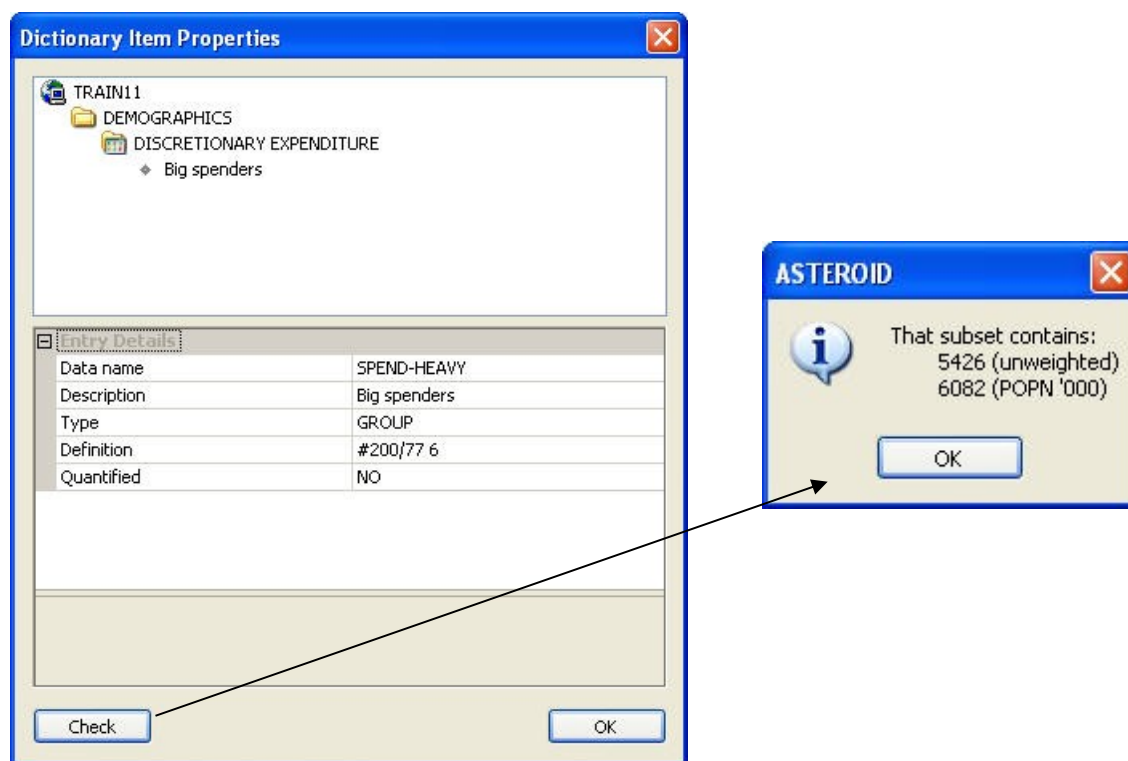
In many of the ASTEROID screens, right clicking over a variable or group and selecting 'Dictionary Item Properties' from the context menu displays summary information on that item. For example, if you right click on a group and select Dictionary Item Properties those items relevant from the following information will be displayed relating to that group:

- Class that it is a member of.
- Variable that it is a member of.
- Data name.
- Description.
- Type of Group, for example, M (Media).

- Primitive definition (for a group or entity).
- Domain (where applicable)
- Default weights (where applicable)
- Quantified
- Score (where applicable)

Reviewing the Dictionary Item Properties of a variable will also display the text of the question, if included in the database.

Use the **Check** button to check the unweighted and weighted counts.

Dictionary Check
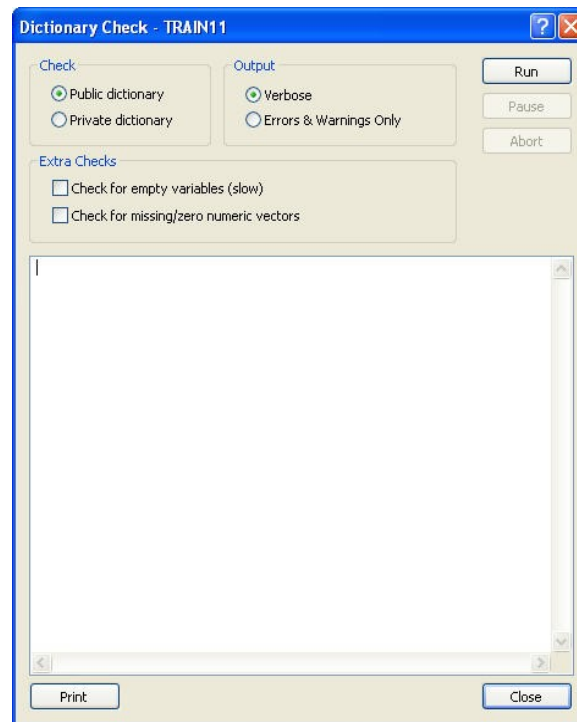
The Dictionary Check function can be accessed by selecting Dictionary Check from the options under Create Definition on the Home tab.

The function checks the syntax of all code within the Data Dictionary, both Public and Private, ensuring all definitions are correct, and reports warnings and errors.

The file (TRACES.lis) that is generated as part of the check process, appends itself with each check that is performed, so it is therefore suggested that the file be cleared regularly if multiple checks are run.   This file can be found in your user directory.

The report options available are:
- Verbose – an extensive report listing all items checked, all warnings, and
- Errors and Warnings – a summarised report listing only the warnings and errors.

Notes: