



Statistics South Africa

**CENSUS 2001**

# Community Profile Databases

## SuperCROSS Training Manual





## Preamble

The SuperCROSS software package is an Australian product that was first used by Stats SA for the dissemination of Census 1996 data. Access to the software was limited to those individuals and organisations that could afford to pay the licence fees. This time around, no licence fee is required to be paid. The SuperCROSS software is available free of charge, together with the Census 2001 Community Profile Databases.

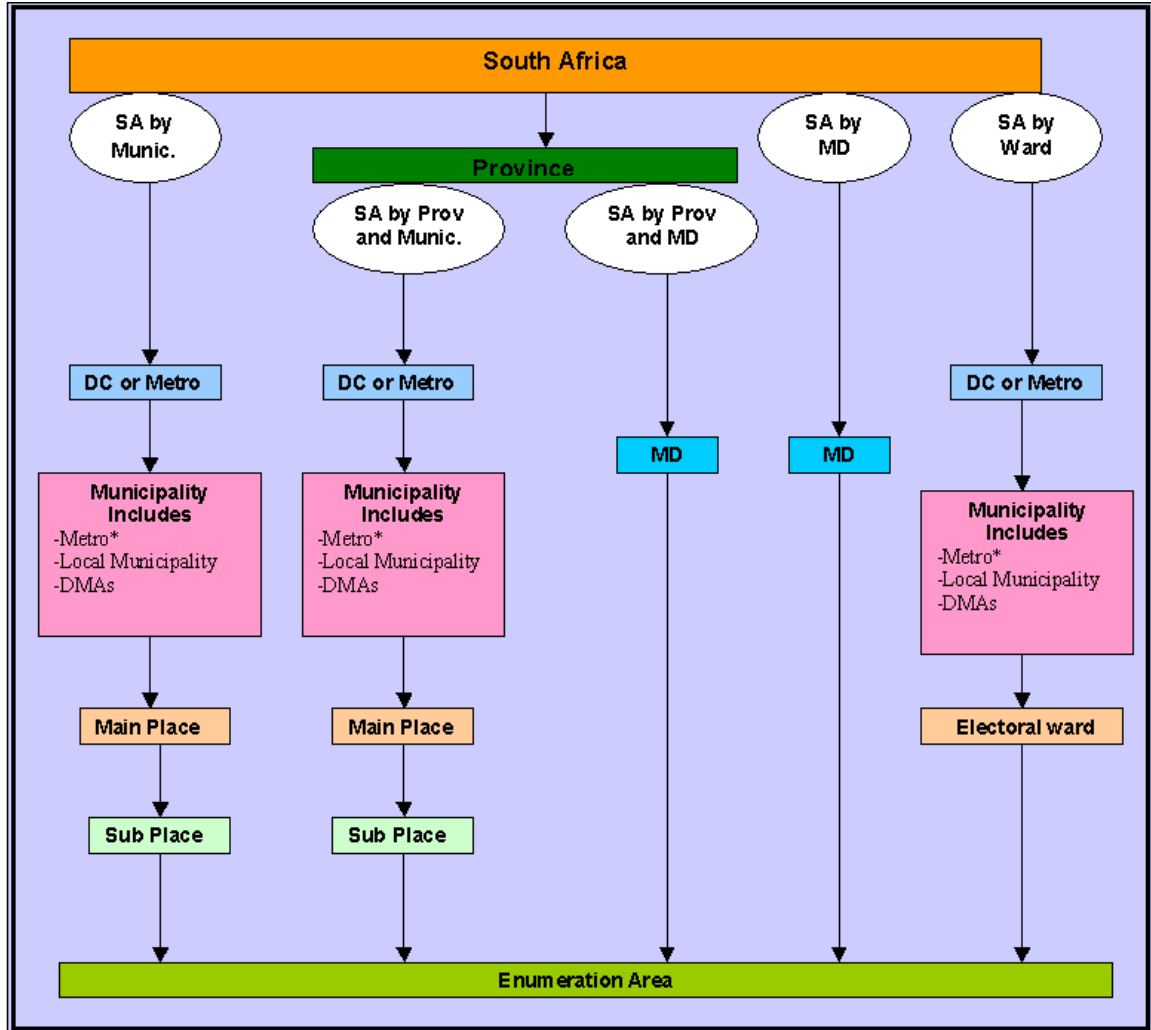
The Community Profile Databases comprise a set of 12 CDs in a black CD wallet. All government departments, major public entities, constitutional institutions, research institutions and educational institutions will receive the first multi-user copy of the Community Profile Databases free of charge. Private businesses, non-governmental organisations, international agencies and private individuals will be required to pay the cost of printing and packaging. Installation and initial training will be provided free of charge. *(Please refer to the Pricing Policy and Tariffs on the Stats SA website, <http://www.statssa.gov.za>, for further details.)*

Census 1996 was the first population census conducted after the 1994 elections, and Census 2001 is the second. Comparisons between the data from the two censuses must be done with caution. Firstly, the geographical hierarchies for the two censuses differ. For example, in 1996 reference was made to placenames. There were 12 852 placenames in the 1996 Community Profile Databases. In 2001 these placenames were regrouped into 3 109 main-places (towns and tribal authorities) and 21 243 sub-places (suburbs and villages). Place names may therefore differ between the two censuses and should be verified before comparisons are done. *(For more information on the geographical hierarchies, please refer to the metadata contained in the Community Profile Databases or to the Geography metadata on Stats SA's website).*

# Information on geography

## Geography hierarchy

The flow diagram below explains the hierarchical structure used for geographical areas in Census 2001.



\* will be expanded to metropolitan substructures when available

The structure consists of seven levels, as follows:

- Level 1 – South Africa
- Level 2 – Province
- Level 3 – District Council (Category C) or Metropolitan Area (Category A)
- Level 4 – Local Municipality (Category B), or District Management Area (DMA)
- Level 5 – Main Place
- Level 6 – Sub-place
- Level 7 – Enumeration Area (EA)

While the structure is intended to be hierarchical, South Africa's geography has cross-boundary entities at all seven levels which complicate the picture. For example, there are eight municipalities that lie across provincial boundary lines. These cross-boundary areas require special codes to indicate to which region each portion belongs.

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# **1. Introduction**

## **1.1 Background**

This document outlines the basic functionality of SuperCROSS with respect to the Census 2001 Community Profile Databases. SuperCROSS is a user-friendly cross-tabulation software that enables a user to design tables, charts, and basic maps from Census 2001 data.

By completing all the exercises in this document, you will learn the basic procedures involved in accessing data from Census 2001. The activity segment of this document has been divided into three main sections. The first section covers the steps involved in creating tables; the second outlines the steps for the creation of charts; and the third covers the steps involved in designing maps. Start with section 2 (creating a table) and work through the exercises in sequential order. Each step in every exercise has been numbered. Section 5 contains an additional exercise that will test what you have learnt.

## **1.2 Objectives**

By the end of the training the trainee should be able to:

- Work with Stats SA's Census 2001 databases and with census data in general;
- Extract Census 2001 data to create simple tables and cross-tabulations within the SuperCROSS environment;
- Group variables together, and save these groups as recode files;
- Export census tables in Excel spreadsheet format;
- Express the census figures in the form of charts within the SuperCROSS environment, and export these charts to other Windows-based software; and
- Create simple maps from census data, and export these maps to other software packages (e.g., Word or PowerPoint).

## 2. Creating a table

This section outlines the steps that are required to create a table. It basically involves a drop-and-drag process where variables are added and 'moved' to various locations on a table. At the end of this section you will know how to perform the following tabular functions: adding and removing fields; adding total and percentage columns; grouping various values; and creating recode files. The resulting table can also be saved in SuperCROSS format or exported as an Excel spreadsheet.

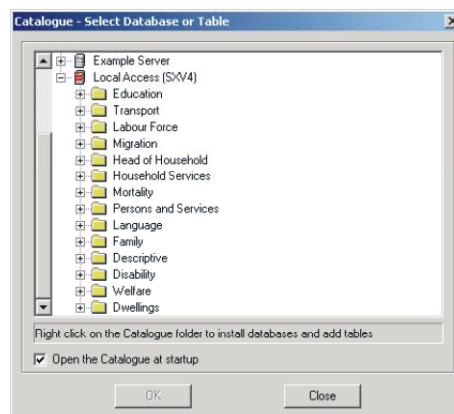
### 2.1 Opening SuperCROSS and selecting databases

- 1) Double click on the SuperTable icon on the desktop.



SuperCROSS will open to reveal what is called the 'Catalogue' dialogue box.

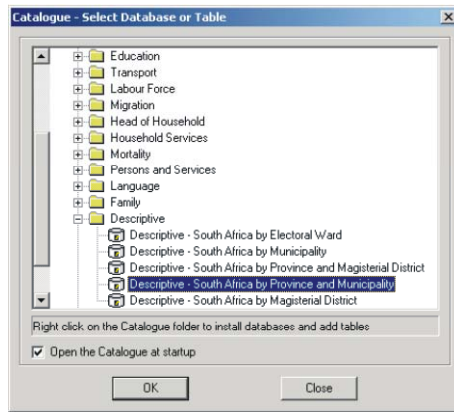
- 2) Open the folder 'Local Access (SXV4)'. This will open folders for each of the fourteen census themes. Depending on the speed of your computer, this might take a couple of moments.



Each theme contains a set of variables that can be used to extract data for a specific topic. For example, if you are interested in obtaining employment data, you will select the 'Labour Force' folder. If, however, you are looking for basic population demographics (such as gender, population group or age) you will select the 'Descriptive' folder. Each folder contains 5 databases, each one representing a separate geographical hierarchy.

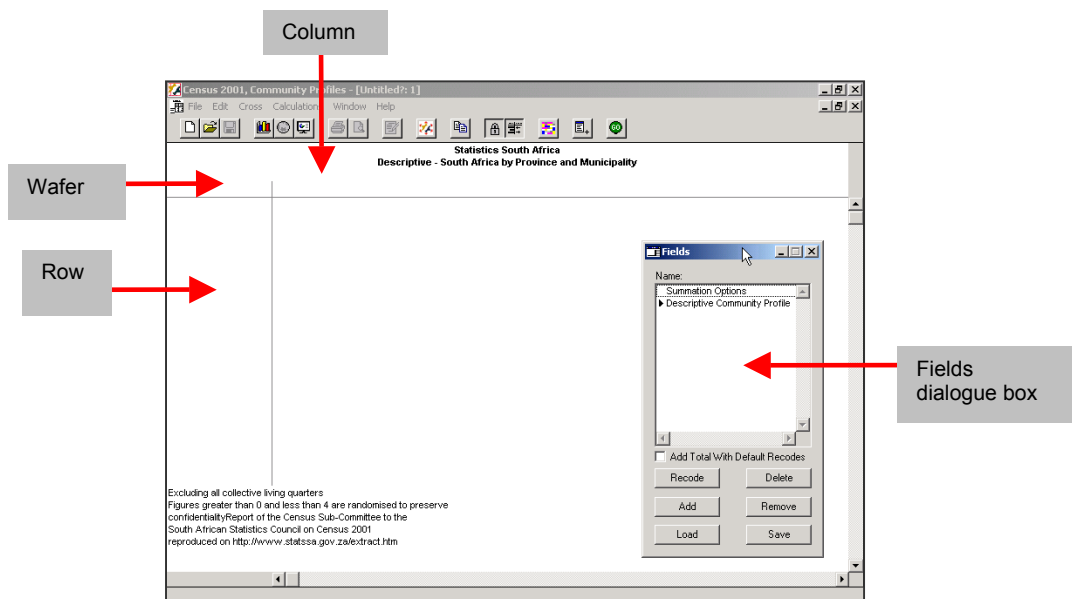
- 3) Open the folder 'Descriptive'.
- 4) Within the 'Descriptive' folder, double click on the database labelled 'Descriptive - South Africa by Province and Municipality'.





## 2.2 Adding fields

Once the database is selected, the 'Catalogue' dialog box will be replaced by a blank table and the 'Fields' dialog box (see below). The 'Fields' dialog box contains the fields that can be added to the table. The blank table contains three areas in which the values can be placed, namely, the *column* area, the *wafer* area and the *row* area.

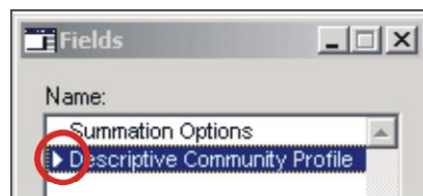


The process of designing a table involves dragging the names of the selected fields from the 'Fields' dialog box to any of these three areas. In this exercise, a table will be created showing the number of individuals by population group for all district councils in the Eastern Cape will be created. The end result will be the following table:

Statistics South Africa Descriptive - South Africa by Province and Municipality Geography by Population group for Person weighted				
	Black African	Coloured	Indian or Asian	White
DC10: Cacadu District Municipality	202,541	140,851	730	44,062
DC12: Amatole	1,539,223	52,289	4,706	68,039
DC13: Chris Hani District Municipality	762,369	31,489	507	15,935
DC14: Ukhahlamba District Municipality	321,281	11,611	93	8,360
DC15: O.R.Tambo	1,668,007	5,448	880	2,148
DC44: Alfred Nzo District Municipality	549,271	881	128	126
Port Elizabeth: Nelson Mandela	592,568	236,058	11,152	165,996

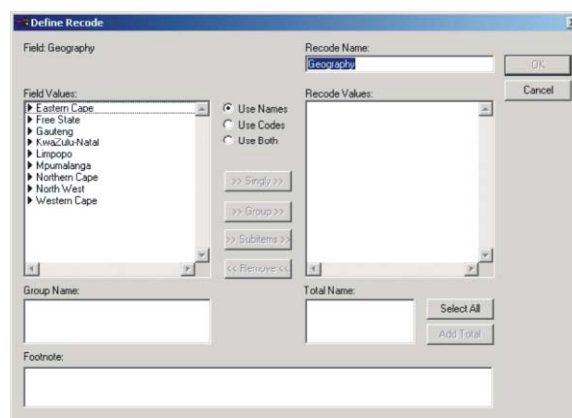
We will now begin by adding the fields of *Geography* (district councils) and *Population group* to create the above table.

- 1) In the 'Fields' dialogue box, double click on the small black arrow next to the word *Descriptive Community Profile*.



By double clicking on the black arrow, all the fields in the 'Descriptive' database will be listed, starting with *Age* and ending with *Present school attendance*.

- 2) Double click on the field *Geography*. The 'Define Recode' dialogue box will appear.



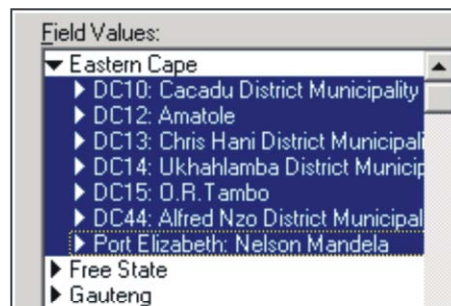
You can use this dialogue box to extract figures for provinces, municipalities, towns and suburbs. In this example, the district councils in the Eastern Cape will be selected.

- 3) Double click on the small black arrow next to *Eastern Cape*. In SuperCROSS, these black arrows indicate folders. By double clicking on the arrow next to *Eastern Cape*, you will reveal all the district councils within this province.

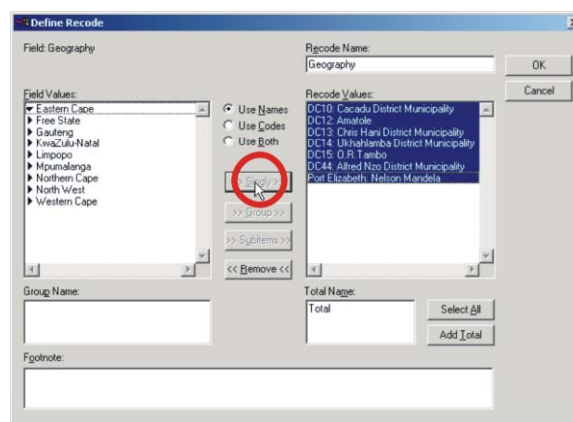


- 3) Select all the district councils in the Eastern Cape.

The selection is made by clicking on the first district council (DC10: Cacadu District Municipality), and holding the left mouse button down while dragging the cursor to the last district council (Port Elizabeth: Nelson Mandela). Alternatively, you can use the shift key on the keyboard to select all the district councils.



- 5) Once the district councils have been selected, click on the option button labelled 'Singly' to move the selected councils from the Fields Values list box to the Recode Values list box.

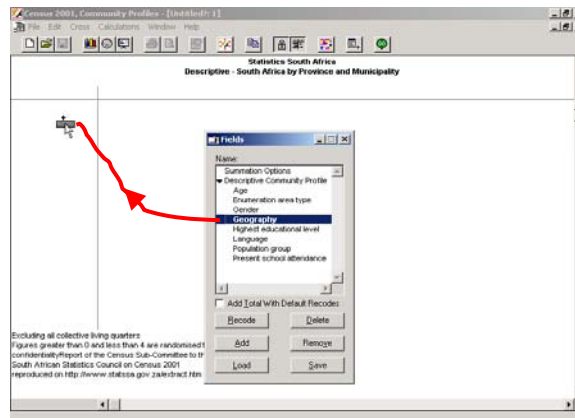


The required values (i.e., all the district councils in the Eastern Cape) have been selected.

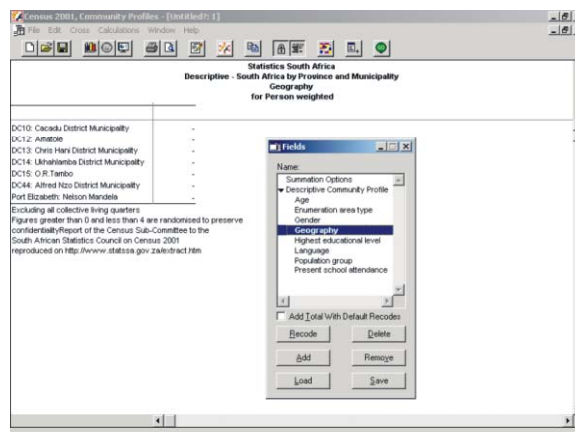
- 6) Click OK on the 'Define Recode' dialogue box.

The 'Define Recode' dialogue box will disappear. You will notice that *Geography* in the 'Fields' dialogue box is now in bold font. This means that a selection has been made and the selected values are ready to be placed onto the table.

- 7) To place the district councils into your table, click on *Geography* and, while holding down the mouse button, drag it to the row area of the empty table.



The district councils that were selected should now appear as rows on the table (see below).



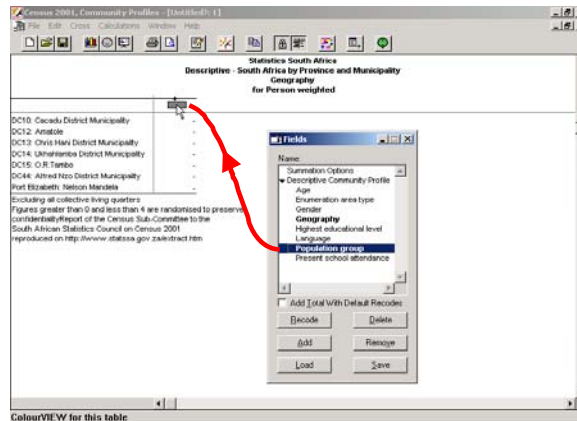
Now the field *Population group* will be added as columns to complete the table.

- 8) Double click on *Population group* in the 'Fields' dialogue box.

The 'Define Recode' dialogue box for *Population group* will appear. All population groups (i.e., Black African, Coloured, Indian or Asian and White) will appear in the Field Values list box.

- 9) Select all population groups, in the same way that the district councils were selected.

- 10) Click on the 'Singly' option button to transfer the selected values to the Recode Values list box.
- 11) Click OK on the 'Define Recode' dialogue box. This box will disappear. *Population group* in the 'Fields' dialogue box is now in bold font.
- 12) Click on *Population group* in the 'Fields' dialogue box and drag it to the Column area of the table (see below).

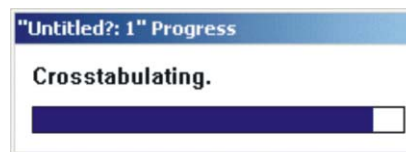


A complete table should now appear on the screen, with the district councils as rows and the population profiles groups as columns. However, as yet there are no figures in the table.

- 13) To populate the table with figures, press the green GO button on the top icon bar.



A progress bar will appear, showing the progress of the cross-tabulation.



After a few moments the progress bar will disappear and the table will be populated with figures (see below).

Statistics South Africa  
Descriptive - South Africa by Province and Municipality  
Geography by Population group  
For Person weighted

	Black African	Coloured	Indian or Asian	White
DC10: Cacadu District Municipality	202,541	140,851	730	44,082
DC12: Amathole	1,539,223	52,269	4,706	69,939
DC13: Chris Hani District Municipality	762,369	31,489	507	15,935
DC14: Ukhahlamba District Municipality	321,281	11,811	93	8,380
DC15: O.R. Tambo	1,868,007	5,448	800	2,148
DC44: Alfred Nzo District Municipality	549,271	981	128	126
Port Elizabeth: Nelson Mandela	592,558	236,058	11,152	165,996

Excluding all collective living quarters  
Figures greater than 0 and less than 4 are randomized to preserve confidentiality  
Report of the Census Sub-Committee to the South African Statistics Council on Census 2001  
reproduced on <http://www.statssa.gov.za/abstract.htm>

Well done! You have just created your first table in SuperCROSS. This table is a basic population table showing the number of individuals in each Eastern Cape district council by population group. The next part of the exercise will show how to save a table once it has been created.

### 2.3 Saving a table in SuperCROSS format

There are a number of ways of saving tables created in SuperCROSS. If you feel that you may need to manipulate the table within SuperCROSS at a later stage, to add additional fields for example, you will need to save the table in SuperCROSS format.

- 1) Click on File > Save As. The 'Save As' dialogue box will appear.
- 2) For the 'Save in' option, select the Desktop.
- 3) Enter **Population\_ECape\_DC** for the 'File name' option.
- 4) You will notice that the SuperCROSS (.SCS) format has been chosen as the default 'Save as type'. Do not change this format.
- 5) Click Save!

Your table has now been saved as a SuperCROSS file. You can open it at a later stage if you need to add or remove fields.

### 2.4 Saving a table in Excel format

You can also export your table in various formats, including Excel spreadsheet format. This makes it easier to send your tables to colleagues who do not have SuperCROSS.

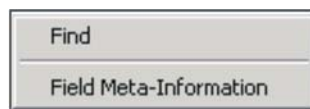
- 1) Click on File > Save As. The 'Save As' dialogue box will appear.
- 2) For the 'Save in' option, select the Desktop.
- 3) Enter **Population\_ECape\_DC** for the 'File name' option.

- 4) For the 'Save as type', select Excel (.XLS).
- 4) Click Save!

## 2.5 Accessing Metadata

All databases in the Community Profiles contain metadata files. Metadata files enable you to find out information about the fields themselves. For example, the metadata file on *Gender* contains notes on how the gender question was phrased in the questionnaire, how the data were collected, and how the results were coded. In the following steps, the metadata file for *Gender* will be opened.

- 7) In the 'Fields' dialogue box, right click on *Gender*. The following option box will appear.

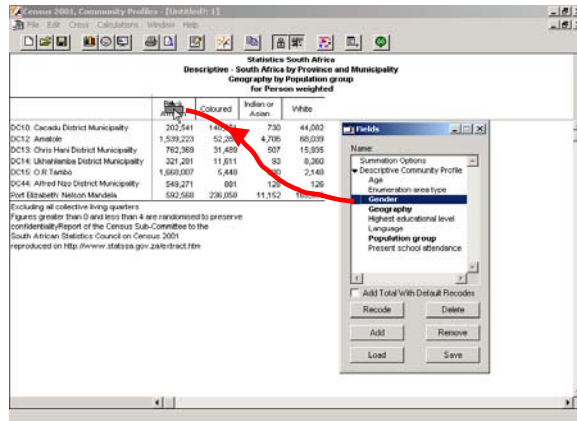


- 8) Click on 'Field Meta-Information'. The metadata document for *Gender*, in the form of a Word document, will appear.
- 9) Close the Word document.

## 2.6 Adding additional fields

In the previous exercise, the two fields of *Geography* (district councils) and *Population group* were cross-tabulated. In this exercise *Gender* will be added as a third field.

- 1) Double click on *Gender* in the 'Fields' dialogue box. The 'Define Recode' dialogue box for *Gender* will appear.
- 2) In the Field Values list box, select both Male and Female.
- 3) Click 'Singly' to transfer Male and Female to the Recode Values list box.
- 4) Click OK. The Define Recode box will disappear and *Gender* will become bold in the 'Fields' dialogue box.
- 5) Click and drag *Gender* from the 'Fields' dialogue box and drop it over the title of the Black African column in the table (see below).



The field of Gender will now appear in the table. Each population group should now be divided into both gender categories.

6) Press the GO button.

	Black African		Coloured		Indian or Asian		White	
	Male	Female	Male	Female	Male	Female	Male	Female
DC10: Cacadu District Municipality	96,810	105,731	67,645	73,207	364	365	21,087	22,995
DC12: Amatole	710,940	828,283	25,222	27,067	2,468	2,238	32,946	35,093
DC13: Chris Hani District Municipality	351,210	411,160	15,169	16,319	269	238	7,799	8,136
DC14: Ukhahlamba District Municipality	149,305	171,977	5,892	5,918	57	36	4,008	4,352
DC15: O.R.Tambo	753,672	914,334	2,706	2,742	467	412	1,157	990
DC44: Alfred Nzo District Municipality	246,297	302,974	483	398	80	48	78	48
Port Elizabeth: Nelson Mandela	281,208	311,360	113,004	123,054	5,525	5,627	80,166	85,830

You can add and cross-tabulate as many fields from the 'Fields' dialogue box as you like. This ability is the greatest power of SuperCROSS as it enables you to design your own census tables with any fields that you require.

## 2.7 Removing fields from a table

Selected fields can also be removed from a table. In the following example *Gender* will be removed from the table (using the same click-and-drag method).

- 1) Click on any of the Male / Female headings in the table, and drag it back to the 'Fields' dialogue box. All gender headings should disappear.

The *Gender* field has now been removed and the table should now only contain the population groups as columns and district councils as rows (as in the original example).

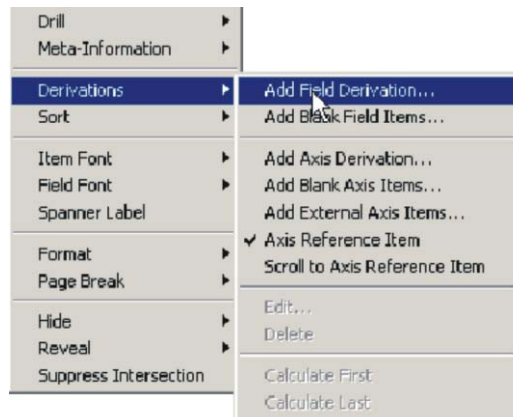
- 2) Press the GO button to populate the table with figures.

## 2.8 Adding a total column

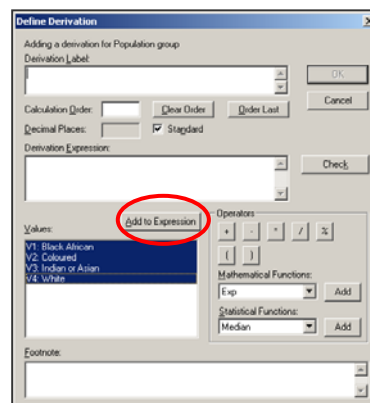
The table looks great, but it is lacking something quite important. In all tables a total column or total row is important to provide a summary of what the table is portraying. Adding totals in a SuperCROSS table is quite easy, and it makes use of what is called the 'Define Derivation' dialogue box.



- 1) Right click on the column heading 'White' (this will create a total column to the right of the White column). A menu will appear.
- 2) Select Derivations > Add Field Derivation.



The 'Define Derivation' dialogue box will appear. It is within this box that the total column will be created.



- 3) All the population groups will be highlighted. Click on the 'Add to Expression' button.

The following expression will appear in the Derivation Expression box: **sum(V1:V4)**. You will also notice that 'Total' appears in the Derivation Label list box – this will be the heading of the total column.

- 4) Click OK. The 'Define Derivation' dialogue box will disappear and the total column will be added to the right of the White column.

White	Total
44,082	388,204
68,039	1,664,257
15,935	810,300
8,360	341,345
2,148	1,676,482
126	550,406
165,996	1,005,774

## 2.9 Adding a total row

A total row can also be added at the bottom of the table to show the total number of individuals per population group for the entire Eastern Cape (i.e., for all district councils).

- 1) Right click on the bottom row (i.e., on *Port Elizabeth: Nelson Mandela*) and select Derivations > Add Field Derivations. The 'Define Derivation' dialogue window should appear, with all district councils listed in the Values list box.
- 2) Click the Add to Expression button.

The following expression will appear in the Derivation Expression list box:  
**sum(V1:V7)**. 'Total' will also appear in the Derivation Label list box.

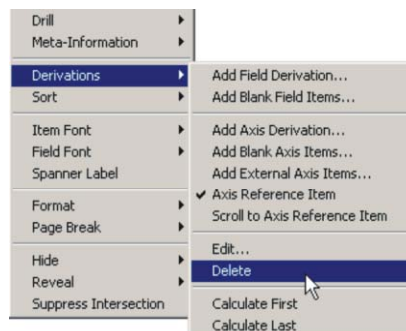
- 3) Click OK. The Define 'Derivation dialogue' box will disappear and the total row will be added under *Port Elizabeth: Nelson Mandela*.

DC44: Alfred Nzo District Municipality	549,271	881	128	126	550,406
Port Elizabeth: Nelson Mandela	592,568	236,058	11,152	165,996	1,005,774
<b>Total</b>	<b>5,635,261</b>	<b>478,627</b>	<b>18,194</b>	<b>304,686</b>	<b>6,436,769</b>

## 2.10 Removing a total column/row

The total row under *Port Elizabeth: Nelson Mandela* will be removed.

- 1) Right click on the word 'Total' (underneath *Port Elizabeth: Nelson Mandela*).
- 2) Select Derivations > Delete.

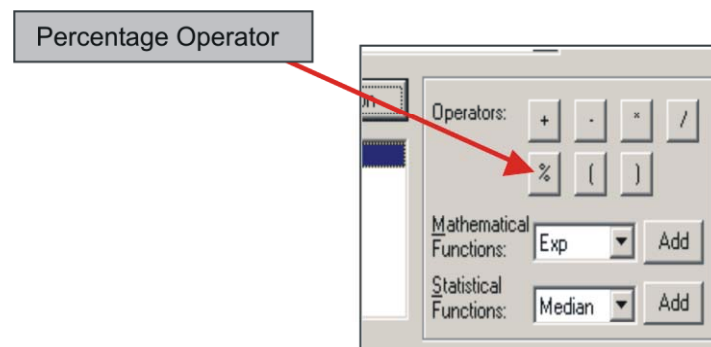


The total row will disappear.

## 2.11 Adding a percentage column

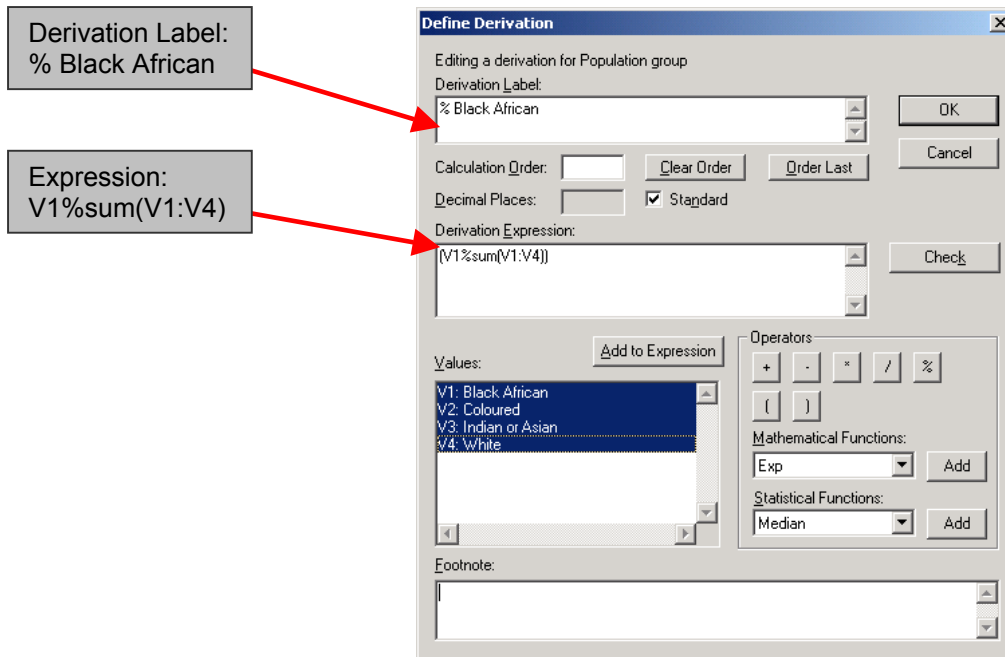
The 'Define Derivations' dialogue box can also be used to add percentages. A percentage column showing the percentage of Black African individuals for all district councils will be added to this table.

- 1) Right click on the title of the Black African column. Select Derivations > Add Field Derivations. The 'Derivations' dialogue box should appear.
- 2) Enter % **Black African** in the Derivation Label list box. This will be the heading of the percentage column.
- 3) In the Values list box, click on 'Black African' *only* to highlight this value on its own.
- 4) Click 'Add To Expression'. V1 will appear in the Derivation Expression list box.
- 5) Click on the '%' operator. The percentage sign will now appear after V1 in the Derivation Expression list box.



- 6) Now, highlight all the population groups in the Values list box and then click 'Add to Expression'. The expression **V1%sum(V1:V4)** should now appear in the Derivation Expression list box.

The 'Define Derivation' dialogue box should now look this.



- Click OK. The 'Define Derivation' dialogue box should disappear and the percentage column (with the heading of '% Black African') should now appear in the table next to the Black African column.

	Black African	% Black African	Coloured
DC10: Cacadu District Municipality	202,541	52	140,851
DC12: Amatole	1,539,223	92	52,289
DC13: Chris Hani District Municipality	762,369	94	31,489
DC14: Ukhahlamba District Municipality	321,281	94	11,611
DC15: O.R.Tambo	1,668,007	99	5,448
DC44: Alfred Nzo District Municipality	549,271	100	881
Port Elizabeth: Nelson Mandela	592,568	59	236,058

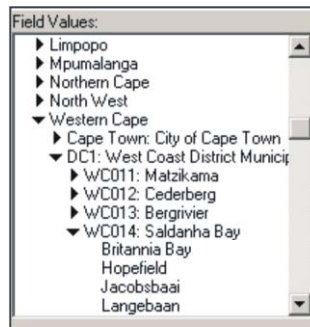
- Save the table by clicking on File > Save (the file should still have the file name **Population\_ECape\_DC**).

## 2.12 Grouping values

In this exercise the grouping function of SuperCROSS will be explored. Different values can be grouped together for particular purposes. This is useful for variables with many values, such as age. A new table will be designed, showing the number of households in selected main places that fall within each income category. These twelve income categories will then be grouped into three broader categories, thus creating a simpler table.

- Close SuperCROSS, then reopen it by double clicking on the SuperTable icon on the desktop.
- In the 'Catalogue' dialogue box, open the folder 'Local Access (SXV4)'. This will open folders for each of the fourteen themes.

- 3) Open the folder 'Household Services'.
- 4) Open the database 'Household Services - South Africa by Province and Municipality'.
- 5) In the 'Fields' dialogue box, double click on the small arrow next to 'Household Services Community Profile' to view all the fields.
- 6) Double click on *Geography*. The 'Define Recode' dialogue box for *Geography* will appear.
- 7) Under the Field Values list, double click on the small black arrow next to *Western Cape* to open the district councils in this province.
- 8) Double click on the small black arrow next to *DC1: West Coast District Municipality* to open the list of local municipalities.
- 9) Double click on the small black arrow next to *WC014: Saldanha Bay* to open the list of main places.



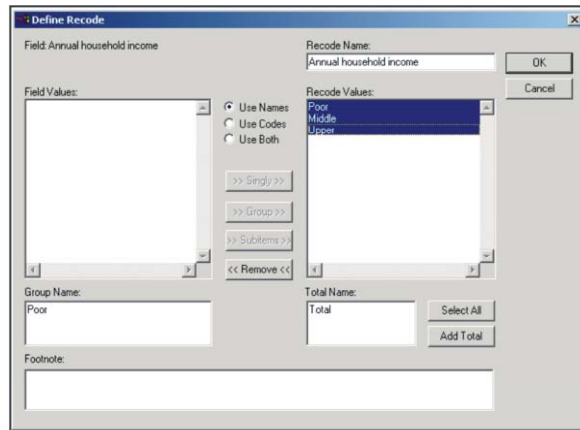
- 10) Select the following main places and click on 'Singly' to bring each of them across to the Recode Values box: *Hopefield, Langebaan, Saldanha Bay, St Helena Bay, and Vredenburg*.
- 11) Click on OK to close the 'Define Recode' dialogue box. Note that *Geography* is now in bold font.
- 12) Click and drag *Geography* from the 'Fields' dialogue box to the **column** area of the blank table. Your selected main places should now appear in the table (as columns).
- 13) Double click on *Annual household income* in the 'Fields' dialogue box. The 'Define Recode' dialogue box for *Annual household income* will appear.
- 14) Select all the income categories and click on 'Singly' to bring them across to the Recode Values list box.
- 15) Click on OK to close the 'Define Recode' dialogue box. You will notice that *Annual household income* in the 'Fields' dialogue box is highlighted.
- 16) Select *Annual household income* and drag it to the **row** area of the table.

- 17) Click the GO button! You should now have a table showing the number of households in all the main places according to each income group. For example, there are 37 households in Langebaan that have no income at all.

This table is quite useful, as you can see how many households fall within each of Stats SA's defined income categories. However, this table might contain too much detail for certain purposes. In SuperCROSS, you can group values together into custom groupings. In the remaining part of this exercise, these income categories will be grouped into the three categories of 'Poor', 'Middle', and 'Upper'.

- 18) Remove the *Annual household income* field by clicking on any of the income categories and dragging it back to the 'Field' dialogue box. All the income categories should disappear, leaving the main places on their own.
- 19) Double click on *Annual household income* in the 'Fields' dialogue box to bring up the 'Define Recode' dialogue box. You will notice that all the income categories are in the Recode Values list box.
- 20) Click on the 'Select All' button to select all the categories, and then click 'Remove'. This will move the categories back to the Field Values list box
- 21) Highlight the income categories from 'No income' to 'R9 601 - R 19 200' (the first four categories) in the Field Values list box.
- 22) In the Group Name listbox, type **Poor** as the name for this group. You will notice that the 'Group' button becomes highlighted.
- 23) Click on the 'Group' button to move the first four income categories (as a single group) to the Recode Values list box.
- 24) To add the second group, highlight the income categories from 'R19 201 - R38 400' to 'R76 801 - R153 600' in the Field Values list box.
- 25) In the Group Name list box, type **Middle** as the name for this group.
- 26) Click on the 'Group' button to move the highlighted income categories (as a single group) to the Recode Values list box. It will be added as a second group in the Recode Values list box.
- 27) Similarly, group the income categories 'R153 601 - R307 200' to 'R2 457 601 and more' into a third group and name it **Upper**.

You should now have the following groupings in your Recode Values listbox:



28) Click OK.

29) Click and drag the *Annual household income* category from the 'Fields' dialogue box to the row section of the table. The grouped categories should now appear in the table.

30) Click GO to populate the table with figures.

Your table should look like the this:

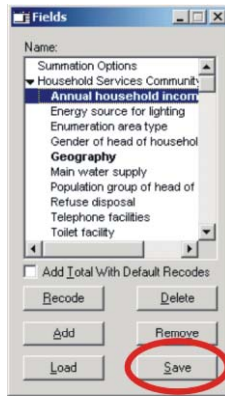
	Hopefield	Langebaan	Saldanha Bay	St Helena Bay	Vredenburg
Poor	122	201	433	706	2,971
Middle	298	686	554	1,248	3,843
Upper	21	215	72	61	596

31) Save the table on the Desktop in SuperCROSS format, and give it the filename **Income\_Groups\_WCape**

## 2.13 Creating recode files

In the previous exercise the grouping function of SuperCROSS was explored. All income categories were grouped into the three groups of 'Poor', 'Middle' and 'Upper'. If you want to use these custom-made income groups for other tables, it will be wise to save the groupings as a recode file. Once saved, a recode file can be used to automatically group categories into custom-made groups whenever a new table is designed. This exercise will explore the steps involved in creating recode files.

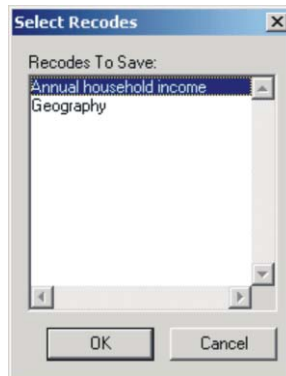
- 1) Open the SuperCROSS file **Income\_Groups\_WCape** if it isn't already open. Click on the Save button on the 'Fields' dialogue box (this save option is used to save groupings as recode files). A 'Save As' dialogue box will appear as indicated below.



- 2) For the 'Save in' option, select the Desktop.
- 3) Type the file name **Income\_WCape\_custom** in the File Name list box and leave the 'Save as type' option as Recode (.RCD).
- 4) Click Save. The 'Save As' dialogue box will be replaced by a 'Select Recodes' dialogue box.

More than one grouping can be saved in a single recode file. The 'Select Recodes' dialogue box allows a user to choose which groupings to save. All groupings are highlighted by default. However, in this exercise we are only interested in saving the income groupings for this recode file.

- 5) Select *Annual household income* only.



- 6) Click OK.

The custom-made income groupings have now been saved as a recode file. This recode file can now be loaded into any new SuperCROSS table where the custom income groupings are needed. The next exercise will explore the steps involved in loading recode files.

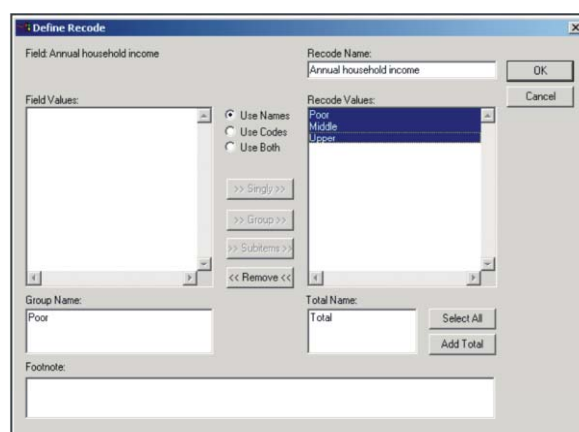


## 2.14 Loading recode files

In the last exercise, the recode file **Income\_WCape\_custom** was created. This recode file, when loaded into any new SuperCROSS table, will automatically group all the single income categories into the custom-made groupings of 'Poor', 'Middle' and 'Upper'. This will avoid having to group individual income categories every time a new SuperCROSS table is created.

In this exercise, a new table will be designed showing income groupings for all the municipalities in South Africa. The **Income\_WCape\_custom** recode will be used to automatically group the income categories into the custom-made groups.

- 1) If SuperCROSS is still open, close it.
- 2) Re-open SuperCROSS by double clicking on the SuperTable icon on the desktop.
- 3) In the 'Catalogue' dialogue box, open the folder 'Local Access (SXV4)'.
- 4) Open the folder 'Household Services'.
- 5) Open the database 'Household Services - South Africa by Province and Municipality'.
- 6) In the 'Fields' dialogue box, double click on the small arrow next to 'Household Services Community Profile' to view all the fields.
- 7) Double click on the field *Geography*. The 'Define Recode' dialogue box for *Geography* will appear.
- 8) In the Field Values list box, select all the provinces and click on the Sub Items button.
- 9) Select 'EC 101: Camdeboo' by clicking on it (see below).



The Sub Items option allows you to select all lower values in a hierarchy. By clicking on 'EC 101: Camdeboo', all the municipalities from all provinces have been selected and placed into the Recode Values list box.

- 10) Click on OK to close the 'Define Recode' dialogue box. You will notice that *Geography* in the 'Fields' dialogue box is in bold font.
- 11) Click and drag *Geography* from the 'Fields' dialogue box to the **row** area of the blank table. The municipalities should now appear in the table as rows.  
  
The recode file that will automatically arrange all the income categories into the custom groupings will now be loaded into the table.
- 12) On the 'Fields' dialogue box, click on the 'Load' button. The 'Open' dialogue box will appear.
- 13) Select the *Income\_WCape\_custom.rcd* file and click 'Open'.
- 14) The 'Select Recodes' dialogue box will appear. Select *Annual household income* and click OK. *Annual household income* in the 'Fields' dialogue box will now appear in bold font.
- 15) Select *Annual household income* and drag it to the column section of the table. Your income groupings should now appear in the table, as 'Poor', 'Middle' and 'Upper'.
- 16) Click GO to view the figures.

Statistics South Africa Household Services - South Africa by Province and Municipality Geography by Annual household income for Household weighted			
	Poor	Middle	Upper
EC101: Camdeboo	6,792	3,314	363
EC102: Blue Crane Route	7,299	2,049	201
EC103: Ikwezi	2,145	521	84
EC104: Makana	12,237	5,156	762
EC105: Ndlambe	11,136	4,218	576
EC106: Sunday's River Valley	7,827	2,469	215
EC107: Baviaans	2,773	1,014	98
EC108: Kouga	11,059	7,520	945
EC109: Kou-Kamma	6,733	2,985	246

- 17) Save the table on the Desktop in SuperCROSS format, and give it the filename **Income\_Groups\_Municipality**

Well done! You have learnt all the steps for creating tables within SuperCROSS. After a little practice you will soon be able to extract and manipulate any of the census variables from all the census databases.

### 3. Creating a chart

SuperCROSS can be used to design simple charts. These charts graphically display the figures presented in created tables. Once a chart has been designed, it can be saved as a Windows Bitmap (BMP) image file, which can then be imported into other Windows based programmes (such as Microsoft Word or PowerPoint).


At the end of this section you will know how to perform the following charting functions: creating a chart; changing chart style; adding chart titles; adding chart legends; and exporting charts to BMP image format.

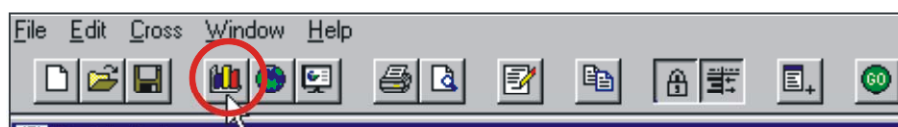
#### 3.1 Creating a chart

During this exercise, a simple chart will be created from the percentage column created in the SuperCROSS table *Population\_ECape\_DC.scs*.

- 1) Open the SuperCROSS file **Population\_ECape\_DC** if it isn't already open. The percentage column, '% Black African' should still be in the table.
- 2) Highlight the entire percentage column by clicking once on the heading '% Black African'.

Black African	% Black African	Coloured
202,541	52	140,851
1,539,223	92	52,289
762,369	94	31,489
321,281	94	11,611
1,668,007	99	5,448
549,271	100	881
592,568	59	236,058

- 3) Click on the Chart button  on the tool bar.



A graph should appear, together with the 'Layer Control' dialogue box. The 'Layer Control' dialogue box can be used to change the properties of the chart.

- 4) Close the 'Fields' dialogue box.
- 5) Close the 'Layer Control' dialogue box.
- 6) Maximize the chart window



This is a basic chart in SuperCROSS. The following steps will show how to change the style of the chart (e.g., from bar chart to pie chart).

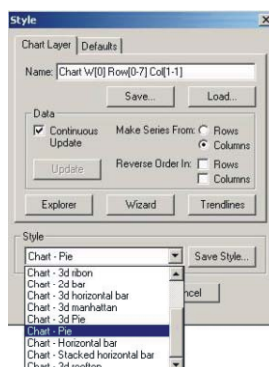
### 3.2 Changing chart style

SuperCROSS contains a variety of different chart styles that can be used to reflect data in different ways. In this exercise the presently displayed chart will be changed to a pie chart.

- 1) Open the 'Layer Control' dialogue box by clicking on View > Layer Control on the top menu.

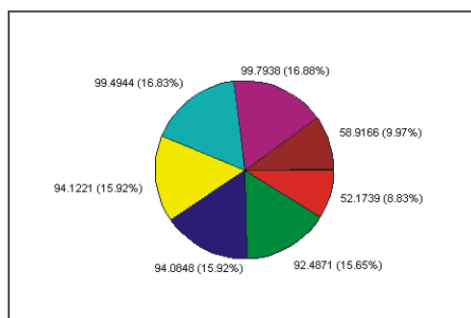


- 2) Click on the Style button on the 'Layer Control' dialogue box. The 'Style' dialogue box should appear.
- 3) Select the **Chart – Pie** option from the Style drop-down list.




- 4) Click OK.
- 5) Close the 'Layer Control' dialogue box.

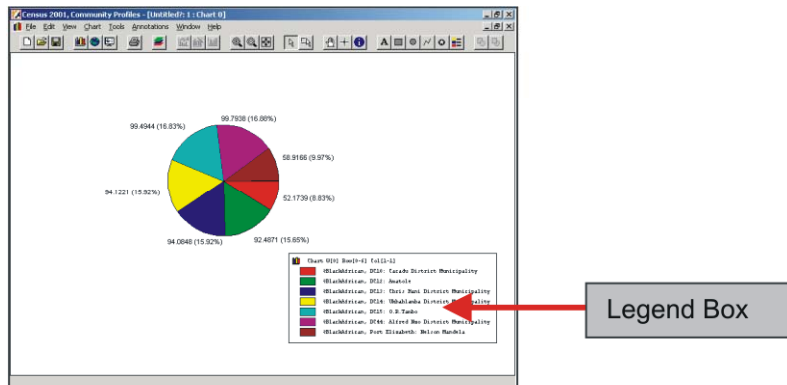
The chart should now appear as a pie chart (see below).




### 3.3 Adding a chart legend

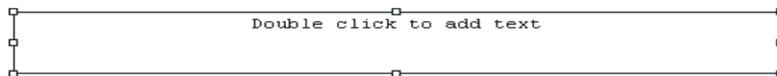
The pie chart looks great, but it needs a legend to show what the different colours (or slices) of the chart represent.

- 1) Click on the Legend button 
- 2) Move your cursor across the screen. You will notice that it takes the form of a cross-hair.
- 3) Click and drag the cross-hair next to the pie chart to create a legend box. Use the box handles to size the legend so that all legend entries can be seen.



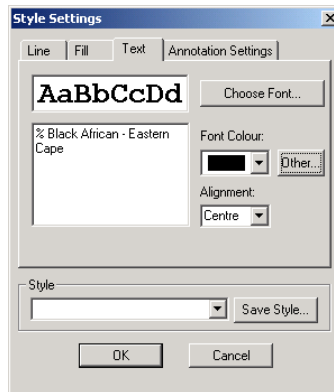
### 3.4 Adding a chart title

- 1) Click on the text box icon 
- 2) Move your cursor across the screen. You will notice that it takes the form of a cross-hair.
- 3) Click and drag the cross-hair above the pie chart to create a text box. It will contain the words 'Double click to add text'.

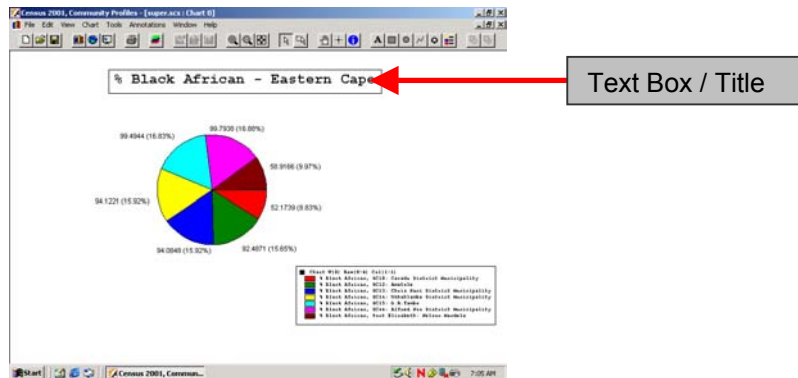


- 4) To enter text, double click on the text box to open the 'Style Settings' dialogue box
- 5) Click on the 'Text' tab on the 'Style Settings' dialogue box.
- 6) In the 'Style Settings' dialogue box, delete 'Double click to add text' and enter '% **Black African – Eastern Cape**' in its place.
- 7) Click on the Choose Font button to open up the 'Font' dialogue box and increase the font size to 20 and make it bold.

- Click OK to close the 'Font' dialogue box. The 'Style Settings' dialogue box should now look like the following screenshot:



- Click OK to close the 'Style Settings' dialogue box. The title '% Black African – Eastern Cape' should appear in the text box.



### 3.5 Saving a Chart in SuperCROSS format

A chart can be saved within the SuperCROSS file together with the table.

- Click on File > Save

The chart will be saved as separate window in the file *Population\_ECape\_DC.scs* together with the associated table. By holding down the Ctrl key and pressing the Tab key at the same time, you can hop between the table and chart windows in *Population\_ECape\_DC.scs*.

### 3.6 Exporting a chart in BMP format

A chart can also be exported to BMP image format, which can then be imported into Word documents and PowerPoint presentations.

- Maximize the chart window and make sure that it is active.
- Click on File > Export Chart. The 'Save As' dialogue box will appear.

- 3) For the 'Save in' option, select the Desktop.
- 4) Enter the name **Population\_Chart\_ECape** in the File name option. Notice that the File type option is Windows Bitmap (BMP).
- 5) Click Save.

### **3.7 Importing a chart (BMP image) into Microsoft Word**

If you have Microsoft Word or PowerPoint, you can import the BMP image of the chart into your documents. The following exercise will outline the steps for importing the BMP image into Microsoft Word; the same steps can be used for PowerPoint.

- 1) Close SuperCROSS.
- 2) Open Microsoft Word.
- 3) On the Microsoft Word menu, click on Insert > Picture > From File. The 'Insert Picture' dialogue box should open.
- 4) Select the Bitmap image *Population\_Chart\_ECape* and click Insert. The chart should now appear in your Word document.
- 5) Save the Word document on the Desktop with the filename of **ECape\_Chart**.
- 6) Close Microsoft Word.

These are the simple steps involved in creating a chart within the SuperCROSS environment. Although the charting function isn't as comprehensive as in Excel, it does enable the user to represent the data in basic graphical format.

The creation of tables and charts within SuperCROSS has now been covered. The next section will explore the steps involved in creating basic maps.


## 4. Creating a map

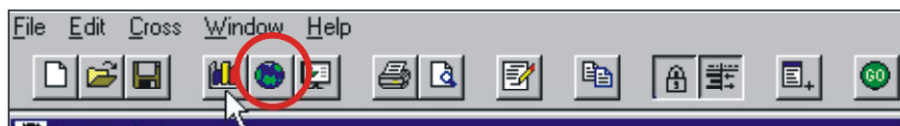
Not only can charts be created within the SuperCROSS environment, but simple maps can also be designed to represent the data (through another software package called ArcExplorer). Within the Community Profiles, geographical boundaries have been included for provinces, district councils, municipalities, magisterial districts, wards, main places and sub places.

This section of the manual will explore the steps for the following mapping functions: creating maps; adding feature names; and exporting maps to bmp image format.


### 4.1 Creating a map

In this exercise a simple map will be created from a percentage column created in the SuperCROSS table of *Income\_Groups\_Municipality.scs*

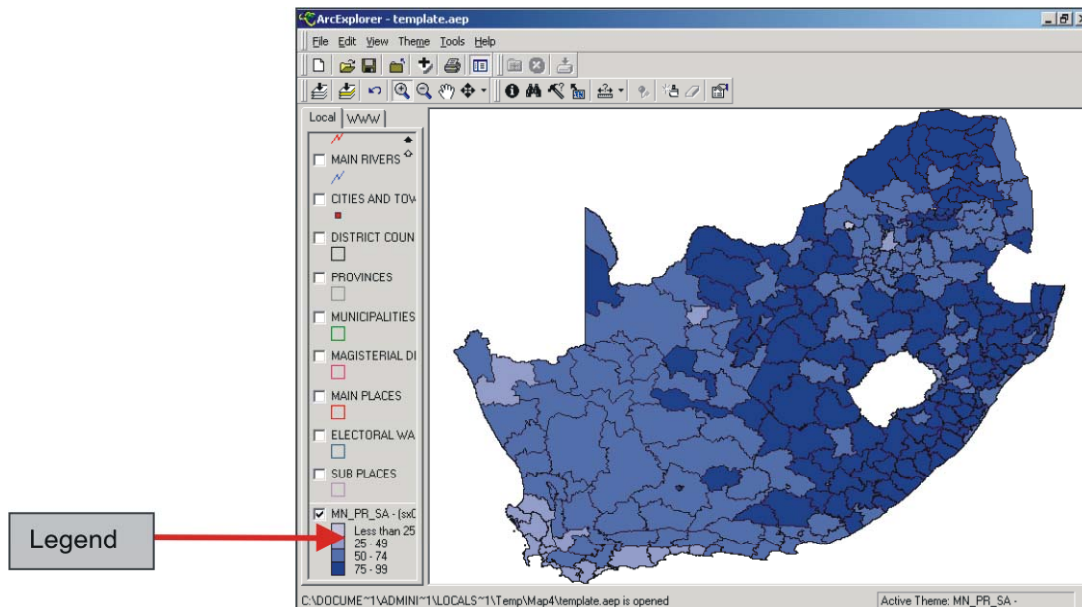
- 1) Close SuperTable and reopen it. Open the SuperCROSS file *Income\_Groups\_Municipality.scs*
- 2) Create a percentage column for the 'Poor' income category, and name it % **Poor** (see page 14 for how to add a percentage column).
- 3) Highlight the 'Poor' percentage column.
- 4) Click on the Map button. 



A map of South Africa should appear in the software package called ArcExplorer.

- 5) Maximize the map 





This is the basic structure of the map. Notice the legend on the left hand side. The blue colour variations represent different percentages of households that fall within the 'Poor' income group, and these are reflected for all municipalities on the map. The following exercises will show how to add feature names and how to export the map in .bmp image format.



## 4.2 Adding feature names and zooming into the map

In this exercise the names of the provinces will be added to the map.

- 1) In the legend box, check the box next to Provinces.



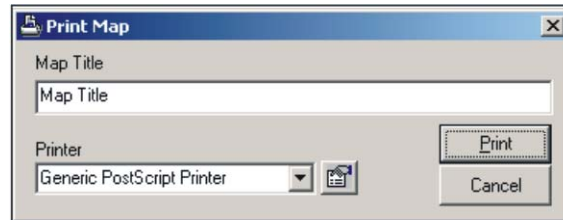
The province names will appear on the map for all the provinces.

- 2) In the legend box, check the following boxes: Main Roads, Cities and Towns, Municipalities.
- 3) Use the Zoom function tool  and zoom into the Gauteng area.
- 4) Press the Zoom to Full Extent icon  to bring the entire map of South Africa back on screen.

### 4.3 Printing a map

A map can be printed with a scale bar, title and north arrow.

- 1) On the map window, click on File > Print. The 'Print Map' dialogue box will appear.



- 2) For the Map Title option, type: 'Percentage of poor households in each municipality, Census 2001'
- 3) Click Print.

### 4.4 Exporting a map in BMP format

A map can also be exported to bmp image format, which can then be imported into Word documents and PowerPoint presentations.

- 1) Click on Edit > Copy to File (BMP). The 'Save Export File As' dialogue box will appear.
- 2) For the 'Save in' option, select the Desktop.
- 3) Enter the name **Poor\_Households** in the File name option. Notice that the File type option is Windows Bitmap (BMP).
- 4) Click Save.

### 4.5 Importing a map (BMP image) into Microsoft Word

If you have Microsoft Word or PowerPoint, you can import the BMP image of the map into your documents. The following exercise will outline the steps for importing the BMP image into Microsoft Word. The same steps can be used for PowerPoint.

- 1) Close SuperCROSS.
- 2) Open Microsoft Word.
- 3) On the Microsoft Word menu, click on Insert > Picture > From File. The 'Insert Picture' dialogue box should open.
- 4) Select the image *Poor\_Households* and click Insert. The map should now appear in your Word document.

- 5) Save the Word document on the Desktop with the filename of **Poverty\_Map**.
- 6) Close Microsoft Word.

## 5. Evaluation / Self Assessment

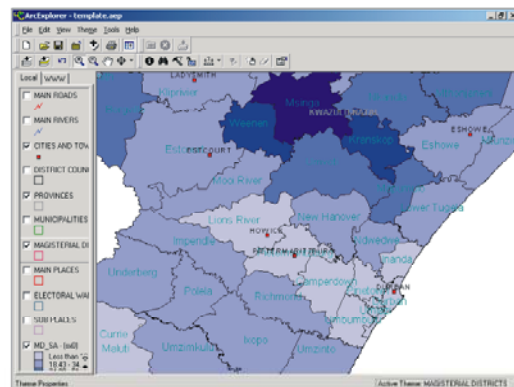
Now that you are familiar with SuperCROSS, you can try the next exercise on your own.

### 5.1 Exercise: Education levels

For this exercise, a table and map will be created, showing the percentage of those who are aged 20 and above with no schooling, for all magisterial districts in South Africa.

- 1) Create a table in the 'Education - South Africa by Magisterial District' database with the *Highest Education Level* recode as columns, and all the magisterial districts as rows. Add *Age group* to the table as well (group all ages from 20 and above into a single group and add this to the table). Create a percentage column for those with no schooling, and map this column. On the map, add the province and magisterial district names, and then zoom into KwaZulu-Natal.
- 2) Save the table with the filename of 'Exercise 1' in Excel and SuperCROSS format.
- 3) Export the map of the Gauteng area into a PowerPoint slide.
- 4) Use the table to answer the following questions:
  - a. According to the map, does Durban in general have a high or low percentage of people aged 20 or above with no schooling?
  - b. What is the percentage of people aged 20 and above in Msinga magisterial district that have no schooling?

	No schooling	%No schooling	Grade 20ab 0	Grade 20ab 1	Grade 20ab 2	Grade 20ab 3
Albany	1,269	22	81	114	158	311
Alexander	1,099	11	178	167	237	418
Albany	5,508	12	688	843	1,329	1,893
Albany	2,375	23	199	229	384	544
Albany	30,578	1	1,724	3,260	6,221	9,289
Alexandria	3,398	23	241	482	588	781
Albany	20,248	23	1,074	1,777	3,219	4,158
Albany North	4,181	23	288	416	627	720
Alexandria	6,509	23	179	303	501	679
Albany	8,027	23	371	421	688	902
Albany	5,522	23	435	486	825	924
Alexandria	32,914	23	1,079	1,927	3,051	3,781
Albany East	2,154	23	168	184	323	427
Albany West	5,204	23	310	480	912	1,290
Albany	4,023	23	682	656	912	1,319
Albany West	3,087	23	227	349	541	806



Answers: a) low; b) 68%

## 6. Conclusion

Thank you for working through this manual. If you have managed to complete all the exercises in this manual you should now know enough to create simple tables, charts and maps from Census 2001 data. If you interested in learning more about SuperCROSS, you can take a look at the Acrobat Reader User Guides, visit our website at <http://www.statssa.gov.za>, or contact us at the contact details listed below.

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This entire document is a summary of three very large Acrobat Reader User Guides that are included in the SuperCROSS package. To access these guides, click on Help > User Guides. Or, alternatively, click on the Start menu > Programmes > STR > SuperTABLE. You can then select between three different PDF documents: SuperTABLE User Guide, SuperCHART User Guide, and SuperMAP User Guide. These user guides contain more extensive information on SuperCROSS functions that are not covered in this manual.