OpenCSAS : READ ME File

Introduction

OpenCSAS is a data-entry and reporting tool for *centric systematic area sample* (CSAS) coverage surveys providing:

- Simple grid-based data-entry

- One-click reporting of:

  - Per-quadrat point and period coverage estimates

  - Overall point and period coverage estimates with 95% confidence intervals

  - Histograms of point and period per-quadrat coverage estimates

  - Mesh-maps of point and period per-quadrat coverage estimates

This file contains the installation instructions and basic information regarding **OpenCSAS**.

OpenCSAS makes use of two cross-platform *open-source* tools:

The *R* language for data analysis and graphics

The TCL/TK ("tickle-teekay") tool control language and toolkit

The use of these tools allows **OpenCSAS** to run, with minor changes, on computers running UNIX™, Linux, Microsoft Windows™, and the Macintosh™ OS-X operating systems.

The current release of **OpenCSAS** has been tested with BSD UNIX™, Debian Linux (running KDE), and Microsoft Windows™ XP.

The release on the CSAS Resource CD is for Microsoft Windows™ only. Anyone wishing to run **OpenCSAS** under UNIX™, Linux, or Macintosh™ OS-X should contact:

mark@brixtonhealth.com

for assistance in porting the *R* and TCL/TK code.

Installation

All installation files for **OpenCSAS** are on the CSAS Resource CD in the **Tools** directory (you can also install **OpenCSAS** from the web-based front-end of the CSAS Resource CD).

In order to run **OpenCSAS** you must first install *R* by running:

> **R-2.3.1-win32.exe**

You should accept the default options particularly with regard to where *R* is to be installed:

> **C:\Program Files\R\R-2.3.1**

Installing *R* in a different location will prevent **OpenCSAS** from working. If you need to install *R* in a different location then contact:

> **mark@brixtonhealth.com**

See "Using **OpenCSAS** with other versions of *R*" (below) for details of using **OpenCSAS** with different version of *R* or when *R* is installed in a different location (e.g. on a network server).

You might want to specify that no icons are placed on the "Desktop" or on the "Start Menu" when installing *R* if you do not plan to use *R* for anything other than producing **OpenCSAS** reports.

Once you have installed *R*, you should install the **OpenCSAS** application by running:

> **SetupOpenCSAS.exe**

This will put a folder in your "Start Menu" called "OpenCSAS". There are two menu options:

Enter Data	:	A simple grid for entering and editing data.
Survey Report	:	Produces and displays a report from a given data file.

You must enter survey data before you can produce a survey report!

Entering data

Normally you will want to use the **OpenCSAS** "Enter Data" module to enter and edit survey data but survey data may also be entered and edited using a spreadsheet and saved as a *comma separated value* (CSV) file. This file **<u>must</u>** have the variable names on the first line with all values separated by commas. There should be no empty rows or columns in the file. See the file:

```
Sample.csv
```

in the **Sample** directory of the CSAS Resource CD for an example of the correct file format. Here are the first six lines of the **Sample.csv** file:

```
x,y,cases,covered,in.program
1,2,8,2,5
2,1,11,0,1
2,2,6,2,3
2,3,5,0,2
3,2,12,1,4
```

Note that the variable names **<u>must</u>** appear **<u>exactly</u>** as shown above and that variable names and data values **<u>must</u>** be separated by commas.

If you experience problems using files created using a spreadsheet they will probably be due to incorrect variable names or the spreadsheet capitalising variable names so that (e.g.) **cases** is saved as **Cases**. Problems may also be caused by the use of separators other than commas (e.g. semi-colons) being used by non-English language versions of spreadsheet software and by empty rows and columns in the file. You can fix such problems by editing the data file in a text editor such as **Notepad**. If you experience any problems with **OpenCSAS** then mail:

```
mark@brixtonhealth.com
```

Specifying the nature of the problem and including a copy of your data survey data file.

Variables

Only five variables are required:

x	The West to East quadrat location
y	The South to North quadrat location
cases	The number of current cases found
covered	The number of current cases found who are in the program
in.program	The total number (cases and non-cases) in the program

NOTE : Older version of the software and some versions of the original Excel spreadsheet used a different definition of the **in.program** variable.

OpenCSAS reports

OpenCSAS reports appear in your system's default web browser (e.g. Mozilla Firefox, Internet Explorer, Netscape, Opera, Konqueror, Safari). For best results you should configure your web-browser to resize large images to fit in the browser window.

OpenCSAS report files are stored in the same directory as the survey data file using the following naming convention:

`DataFile.csv.index.html`	Main report page (or *portal*)
`DataFile.csv.menu.html`	Menu (do **not** open this file)
`DataFile.csv.datatable.html`	Table of data and per-quadrat estimates
`DataFile.csv.summary.html`	Overall summaries with 95% CIs
`DataFile.csv.point.map.png`	Mesh-map of point coverage
`DataFile.csv.period.map.png`	Mesh map of period coverage
`DataFile.csv.point.histogram.png`	Histogram of point coverage
`DataFile.csv.period.histogram.png`	Histogram of period coverage

Where:

`DataFile.csv`

is the name of the survey data file.

The file:

`DataFile.csv.index.html`

is the *portal* to view the reports. Double-click on this file to see the report again without having to regenerate the report. If you choose to regenerate the report, existing HTML and PNG files for that survey data file will be replaced.

The histograms and mesh-maps are stored as separate files in the PNG format. These files can be imported directly into word-processed reports. The PNG format is an open standard and produces files compact enough to be sent using e-mail over slow telephone lines. You may also copy and paste text and tables from the report into a word-processor.

Using `OpenCSAS` with other versions of *R*

`OpenCSAS` assumes that **R** is installed in the directory:

> `C:\Program Files\R\R-2.3.1`

If **R** is installed in another location (or another version of **R** is installed) then the path to the executable `Rcmd` should be changed in the file:

> `C:\Program Files\OpenCSAS\OpenCSAS.bat`

This file can be edited using a text editor such as `Notepad`.

There are further instructions in this file. If need any help making the required changes then mail:

> `mark@brixtonhealth.com`

OpenCSAS License conditions

`OpenCSAS` is an *open-source* application released under the *GNU General Public License*. For details of the license see:

> `http://www.gnu.org/copyleft/gpl.html`