



User's Guide for macOS with Stata and R

## Table of Contents

1.0	Requirements.....	4
2.0	Setup .....	4
3.0	Basics of StatTag .....	4
3.1	StatTag Elements .....	5
3.2	Navigating StatTag for macOS .....	5
3.3	Interacting with the StatTag for macOS interface .....	8
3.4	Managing Tags .....	9
4.0	Defining Tags.....	15
4.1	Structure .....	15
4.2	Syntax.....	17
4.3	Tag Editor .....	17
5.0	Formatting Tags .....	18
5.1	Values.....	19
5.2	Tables .....	19
5.3	Formatting after insertion .....	19
6.0	Troubleshooting .....	20
7.0	Acknowledgements.....	23
	Appendix A. Future Enhancements .....	24
	Appendix B. Licenses.....	26



---

### Let's Stay in Touch!

The StatTag team appreciates all feedback and would love to hear from you!

In particular:

1. Did you find StatTag easy to use? Was it intuitive?
2. Did StatTag function as expected? Were you able to incorporate your working statistical package code? Were you able to tag documents?
3. Did you encounter any errors? If so, what happened? Can you tell us how to reproduce them?

Please email your feedback to: [StatTag@northwestern.edu](mailto:StatTag@northwestern.edu)

You can also reach us on Twitter: <http://twitter.com/openstattag>

---



---

### Open and Free

StatTag is open source and provided for free, courtesy of Northwestern University under a grant by the National Institutes of Health.

Visit us on GitHub: <http://github.com/stattag>

---

## 1.0 Requirements

### *Requirements*

StatTag requires the following

- macOS 10.10 and above
- Microsoft Word 2016
- One or more supported statistical applications
  - Stata 13 and above
  - R



---

**Note:** StatTag should work with Microsoft Word 2011, but for this release we do not supply a toolbar for more user-friendly integration.

---

## 2.0 Setup

StatTag can be installed by simply dragging and dropping the program in your Applications directory.

- **Copy StatTag to your /Applications folder**
- **Install the StatTag Toolbar for Word**
  - **Launch StatTag** (StatTag will automatically launch Microsoft Word if it is not already running)
  - On first launch, **StatTag should prompt you to install a Word toolbar**
  - You will need to **close and restart Word** in order for the Word toolbar to activate



---

**Note:** If you should wish to remove or reinstall the toolbar for Word, you can do so from within StatTag via the “StatTag” menu’s “Install Word Toolbar” and “Remove Word Toolbar” options.

---

## 3.0 Basics of StatTag

StatTag is user-friendly software that integrates statistical code with document preparation in Microsoft Word. StatTag facilitates reproducible research by connecting Word documents, such as a manuscript, to associated statistical code. Word documents prepared with StatTag are reproducible dynamic documents: statistical results in the document can be automatically updated if either statistical code or data change. In addition, StatTag allows statistical code to be edited directly from Microsoft Word.

StatTag will link any code file written for supported statistical applications with your Word document, run the code file from Word, and insert any tagged results.

There are three main steps to using StatTag:

1. **Link code file(s).** Connect a Word document to files containing statistical code (i.e. .do or .R file).
2. **Create tags.** Annotate the code files to tag results, tables, or figures that are of interest.
3. **Insert tags.** Instruct StatTag where to insert those results within the Word document itself.



**Note:** We recommend that you begin with a code file that already contains your working statistical code and generates the results of interest. With StatTag, it is possible to write your statistical code directly from Word, but not as convenient as writing your code files in the statistical program's editor.

## 3.1 StatTag Elements

### *Microsoft Word Document*

A Word document represents the “hub” for your team’s document authoring. Word provides the document formatting and editing tools.

### *Code File*

A Code File is text file with commands that are intended to run in any of the supported statistical applications (currently Stata, R in the next release, possibly Matlab or other programs in future releases)). A code file is the source file that your project or study uses to compute findings from data sets. With StatTag, code files are “linked” to Microsoft Word documents so that they can be imported and used. The code files are read so that you can identify sections that produce output that you wish to embed in Word.

### *Tag*

A Tag is a unit of statistical output from your Code File that you would like to treat as a unique, reproducible data element. Tags in your code file(s) identify numbers, tables, figures, or verbatim output (raw output from the statistical program console) that you would like to embed in your Word document.

A tag is defined by three components, which make up the “identity” for a tag:

- **Code File:** The source statistical code file where the tag is defined
- **Tag name:** The unique, user-friendly name for a tag
- **Tag format:** The combination of attributes that define how a tag’s output should be formatted within a Microsoft Word document


## 3.2 Navigating StatTag for macOS

StatTag for macOS performs the same functions as StatTag for Windows, but with a user interface more consistent with macOS. There are fewer buttons, but all of StatTag’s core capabilities.



### *The StatTag Word Toolbar (Word 2016)*

We suggest installing the StatTag toolbar for Microsoft Word. It makes interaction with StatTag easier and more reliable. The StatTag toolbar has two groups of buttons which provide quick access to key functions




#### Core Functions

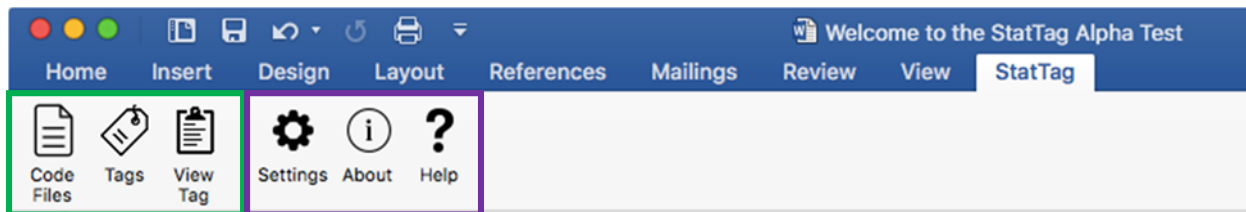
	Code Files	Opens the Code Files panel. See “Code Files” below.
---	------------	---

## StatTag macOS Version 1.0 User's Guide

	Tags	Opens the Tags panel. See “Tags” below.
	View Tag	After selecting a Tag, clicking on this icon will open the Tag definition editor. See “Tag Editor” below.

### Utilities

	Settings	Opens the Settings window. See “Settings” below.
	About	Opens the About window. Provides basic information about StatTag as well as links to the StatTag team’s <a href="#">email address</a> and <a href="#">GitHub</a> repository.
	Help	Opens StatTag’s help documentation



## The StatTag Application Interface

In addition to the Word Toolbar, StatTag installs as an independent application, with its own interface. The interface organizes four panels.

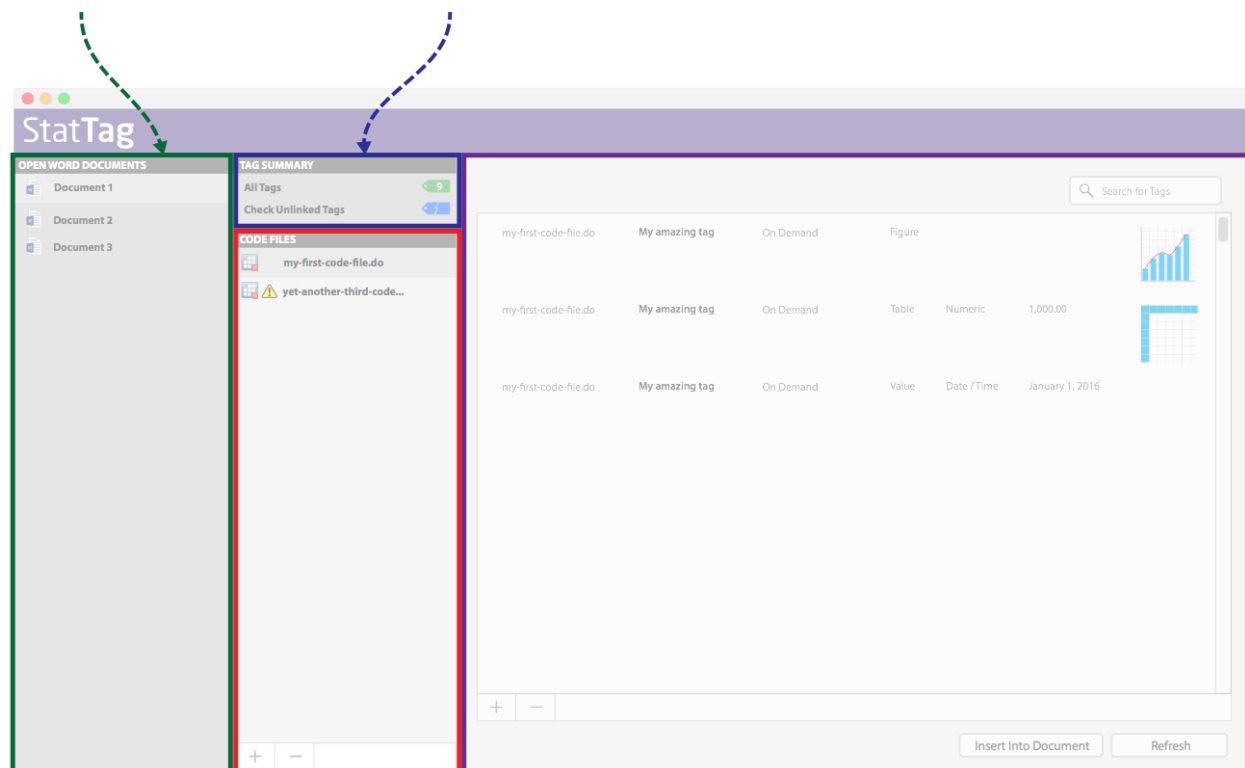
Word Document Browser	Displays a list of documents currently open in Microsoft Word.
Tag Summary Dashboard	Provides an overview of the active Word document's tags.
Document Code File Manager	Lists the code files associated with your active Word document.
Activity Panel	An interface to insert tags, work with existing tags, and remove tags from the active Word document.

### Word Document Browser

View and select documents currently open in Microsoft Word

### Tag Summary Dashboard

View the state of tags used in your Microsoft Word document



### Document Code File Manager

View the state of tags used in your Microsoft Word document

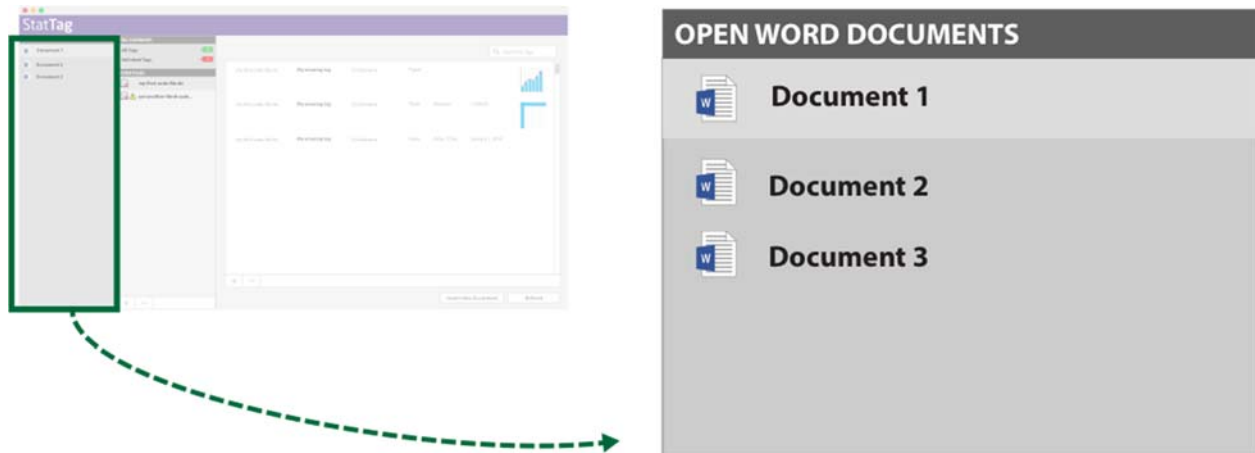
### Activity Panel

Interact with StatTag. This area will change based on your activities. If a code file is selected, for example, StatTag will display a list of tags associated with that code file

### 3.3 Interacting with the StatTag for macOS interface

#### **Word Document Browser**

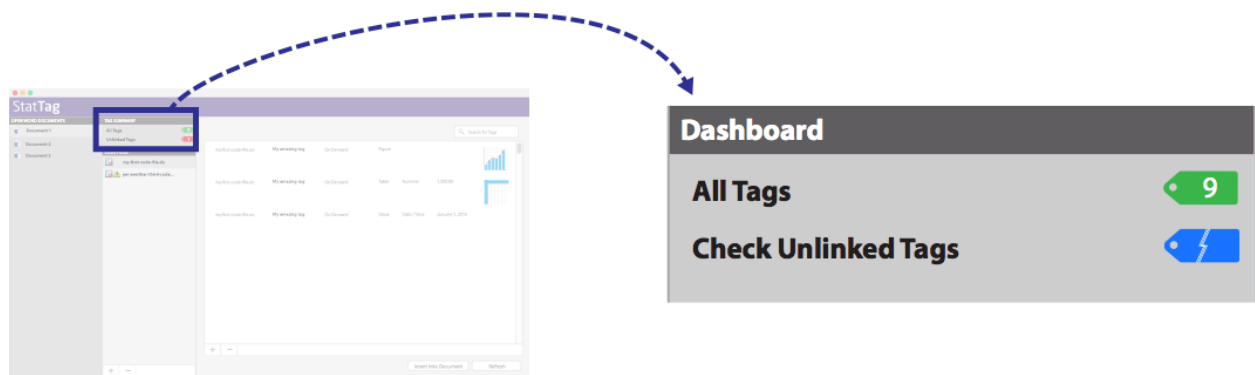
All Microsoft Word documents currently open on your computer will be displayed here. Clicking on a Word document will activate it in StatTag, loading all code files and associated tag information in the other panels.



#### **Tag Summary Dashboard**

This panel will show summary information for any tags in the active Word document. It will display any of three options, depending on what is in your document:

- **“All Tags”** – A count of the active tags available from code files linked to your Word document. Clicking on “All Tags” will open a list of all Tags currently available for use in your Code Files.
- **“Unlinked Tags”** – Tags which are used in your Word document, but which are not found in any of the linked code files. Clicking on “Unlinked Tags” will open a list of the tags which are in your Word document, but cannot be found in your project’s accessible Code Files.
- **“Duplicate Tags”** – Any tag names that are reused within the same code file. Clicking on “Duplicate Tags” will open a list of Tag names which are duplicated either within or across your Code Files. See “Duplicate Tags” below.



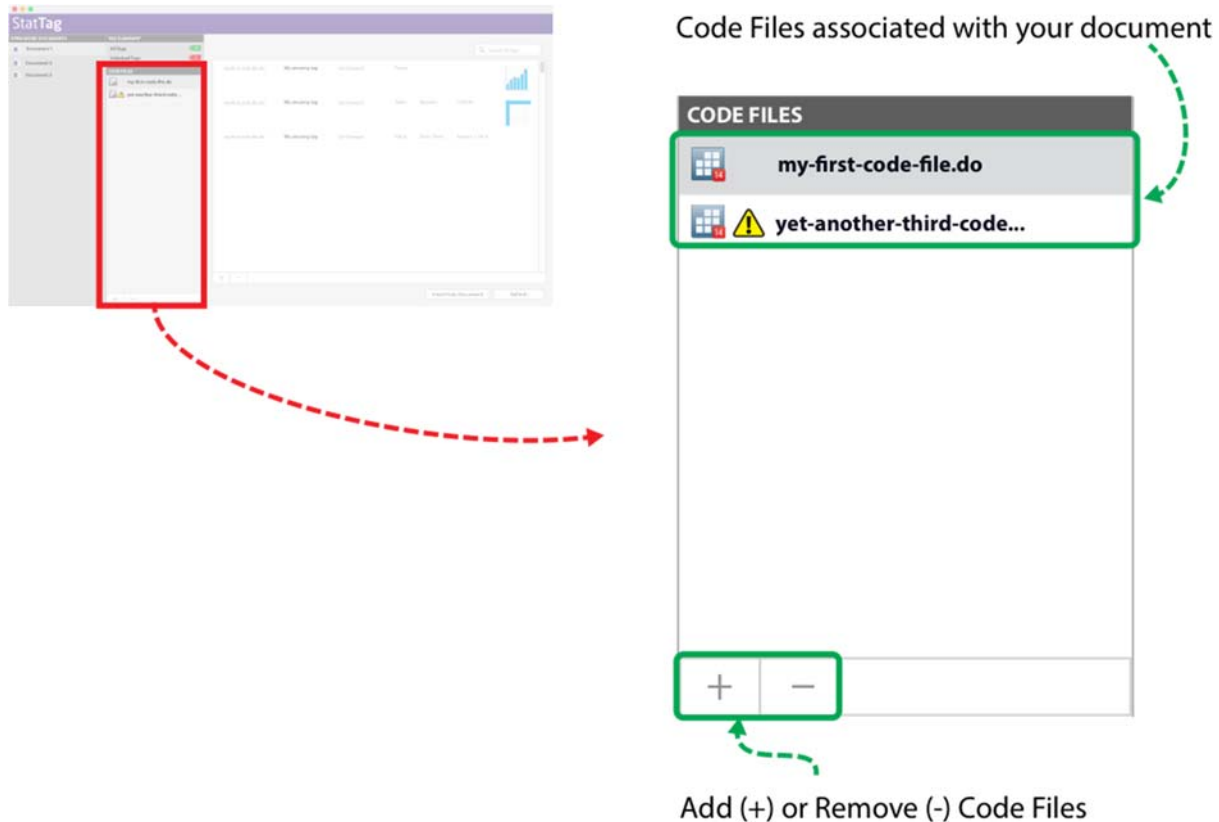


## Document Code File Manager

This panel will show any code files currently linked to you active Word document.

You can:

- View a list of code files currently associated with your document
- Attach or remove code files using the macOS-standard (+) and (-)([delete](#)) buttons
- Attach or remove code files by dragging/dropping code files into the StatTag code file list from Finder



## Activity Panel

Clicking on a code file or selecting multiple code files will cause the Activity Window to display tags associated with the selected code file(s). From the activity panel, tags can be managed (define, add, remove), insert, and refresh tags.

## 3.4 Managing Tags

The activity panel will become active when a code file is selected or the “All Tags” option is selected in the Tag Summary panel. Selecting one or more code files will filter the list of displayed tags.

### Adding Tags

1. **Activate the Tag panel** by clicking on a **Code File** or selecting **All Tags**

## StatTag macOS Version 1.0 User's Guide

2. Click on the **add (+)** button.
3. To **modify** the definition of a tag, simply **double-click** on the tag

Information on adding tags is described in greater detail in the following section.

### Removing Tags

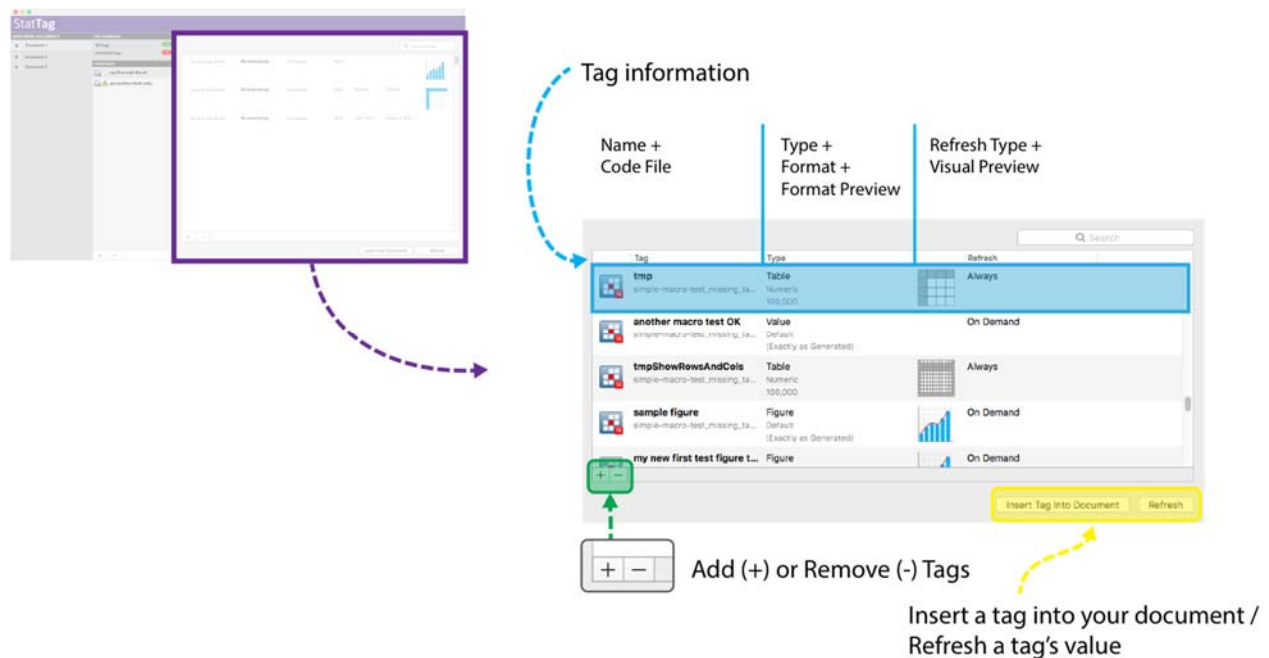
1. **Activate the Tag panel** by clicking on a **Code File** or selecting **All Tags**
2. Click on the **remove (-)** button.
3. To **modify** the definition of a tag, simply **double-click** on the tag

### Inserting Tags

1. **Select one or more tags** in the tag list. (To select multiple tags hold the (shift) key while clicking and selecting a range of tags)
2. Click on the **"Insert Tag into Document"** button.
3. You will see a progress bar while the tags process and, finally, feedback if there were issues.

### Refreshing Tags

1. **Select one or more tags** in the tag list. (To select multiple tags hold the (shift) key while clicking and selecting a range of tags)
2. Click on the **"Refresh"** button.
3. You will see a progress bar while the tags process and, finally, feedback if there were issues.



### Inserting Figure Tags (Microsoft Word 2016)

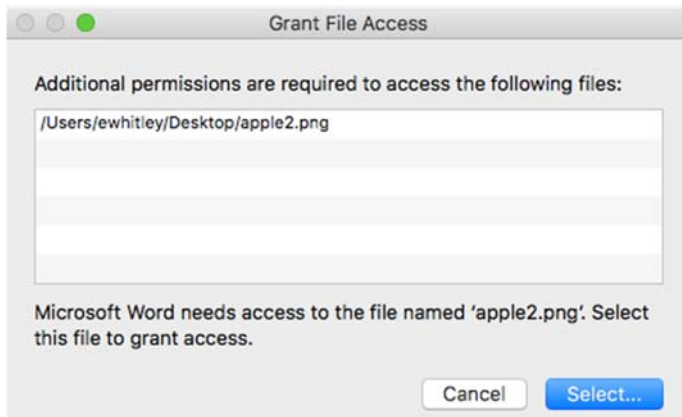
When inserting figure tags, Microsoft Word 2016 will prompt you to allow it access to the related figure graphic. This is by design. Microsoft Word 2016 for macOS uses a security technology known as the

## StatTag macOS Version 1.0 User's Guide

“Apple Sandbox.” It is designed to help protect users and prevents applications from arbitrarily accessing files on the user’s computer.

When StatTag asks Microsoft Word 2016 to insert a figure / image, the Apple Sandbox obligates Word to first obtain permission to access the image on user’s computer. Apple’s security system asserts itself as a “stop sign” before allowing Word to proceed.

Word will notify the user of the request and ask that they authorize access to the file:



Once you click on the image and hits the “Select” button, a window will open and the requested file will be presented. You must then click “Grant Access” to allow Word to insert the image.



This is done once per file. After the user has authorized Microsoft Word to access a file, that decision is stored for future use. Subsequent requests to access that file from within Microsoft Word are automatically approved. If a figure is refreshed or another code file references the same file, the no further approval is required.

### ***Unlinked Tags***

Tags can become “unlinked” if the statistical code is unlinked from the Word document, or if the statistical code is edited outside of StatTag and the notations are modified. For example, code could

become unlinked if the code file (.do or .R) is moved to new location without changing the code file path in StatTag.

### Understanding Unlinked Tags

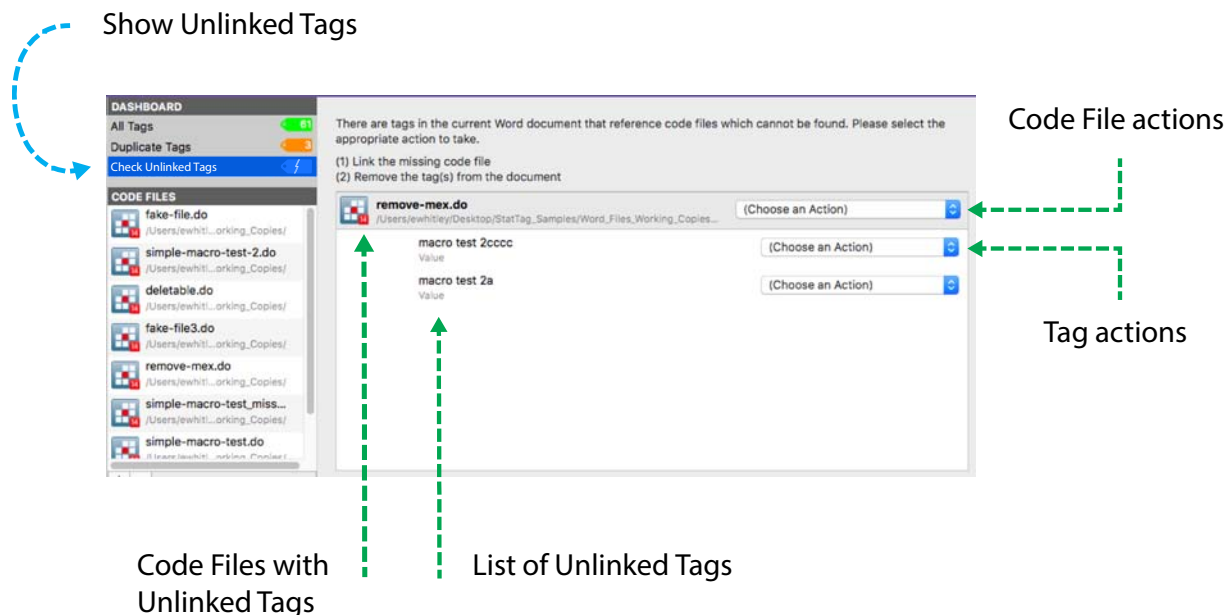
When a tag is “unlinked,” it means that StatTag can no longer connect a field from within the Word document to a tag in a code file. This presents a risk to the veracity of the document. As code files change or other findings within the document are updated, these “unlinked” tags will be frozen in time and no longer kept in sync with other findings. Additionally, unlinked tags preclude the ability to capitalize on one of the central reproducibility features of StatTag – insight into the source of the data element from the published finding. Readers can no longer click on a field and view the code that was used in its generation.

There are two scenarios that can lead to an Unlinked Tag

- 1) Inaccessible Code File
  - a. If a tag was inserted into the Word document, but the related source code file is no longer accessible, the tag is considered “unlinked” as its definition cannot be accessed
- 2) The tag’s definition is no longer accessible within a Code File
  - a. If a tag was inserted into the Word document, but has since been removed from a code file (or the tag name removed or changed outside of StatTag), the field in the Word document cannot be linked to a given tag

### Checking for Unlinked Tags

In order to determine if there are Unlinked Tags in your document, select the “Check Unlinked Tags” option in the tag dashboard. This will start the process of validating your StatTag Word document, including detecting if any of the existing tags are no longer accessible.



### Resolving Unlinked Tags

StatTag will detect Unlinked Tags and alert users to them within the Tag Dashboard. Users can then take one of a few actions.

- Act on the **code file and all related tags**
  - Link to a Different Code File. Link a missing code file to a new location. This will relink all related tags found in Microsoft Word to the new code file.
  - Remove Unlinked Tags from Word Document. Remove all of the Code File's unlinked tags from the Microsoft Word document. Existing Microsoft Word fields will be updated to reflect a "[REMOVED]" placeholder for easier visual identification.
- Act on an **individual tag**
  - Link to a Different Code File. Identical to the code file action, except limited to this individual tag.
  - Remove Unlinked Tag from Word Document. Identical to the code file action, except limited to this individual tag.

### ***Duplicate Tags***

StatTag relies on a tag's code file and name to create a unique identity. If two tags share the same name within the same code file, StatTag cannot differentiate them when communicating between a code file and Microsoft Word. StatTag refers to this name reuse as a "duplicate" tag.

### **Understanding Duplicate Tags**

There are two kinds of duplicate tags:

- 1) Name reused **within the same code file.**
  - a. For a single code file "my code file.do" we have
    - i. A tag named "My Important Finding" (number, linked to lines 1-10)
    - ii. A tag named "My Important Finding" (date, linked to lines 98-99)
- 2) Name reused **across separate code files.**
  - a. Code file "my code file.do" we have
    - i. A tag named "An Incredible Result" (number, percent, linked to line 25)
  - b. Code file "my other code file.do" we have
    - i. A tag named "An Incredible Result" (number, percent, linked to line 33)

**Duplicate tags within the same code file must be changed.** Duplicate tags within the same code file will cause an error and StatTag will stop completely.

Duplicate tags across two different code files are treated as warnings because they are potentially confusing. It is strongly suggested you change one of the tag names if possible.

### **Resolving Duplicate Tags Within StatTag**

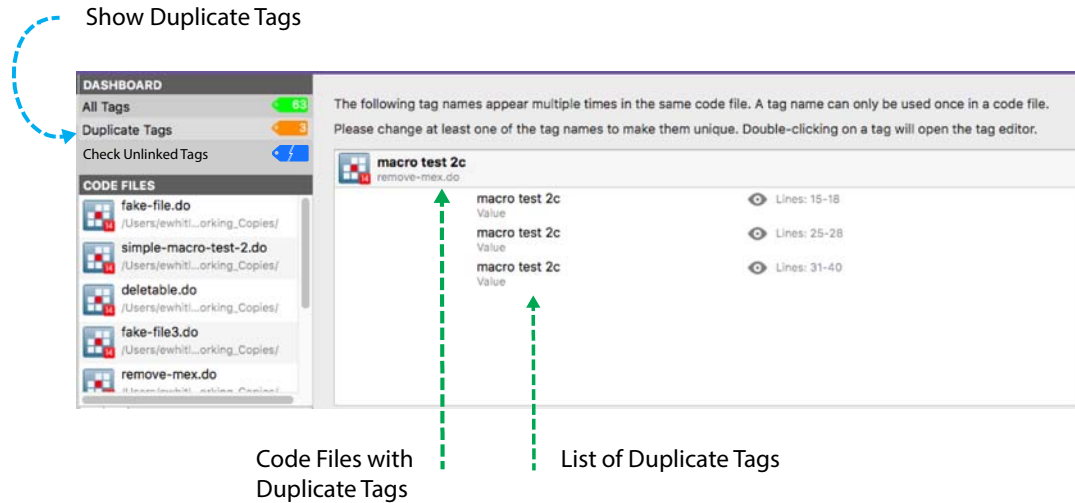
Duplicate tags will be automatically detected by StatTag and then listed on the Tag Dashboard. Clicking on the "Duplicate Tags" dashboard item will load the details in the main activity panel.

To resolve a duplicate tag:

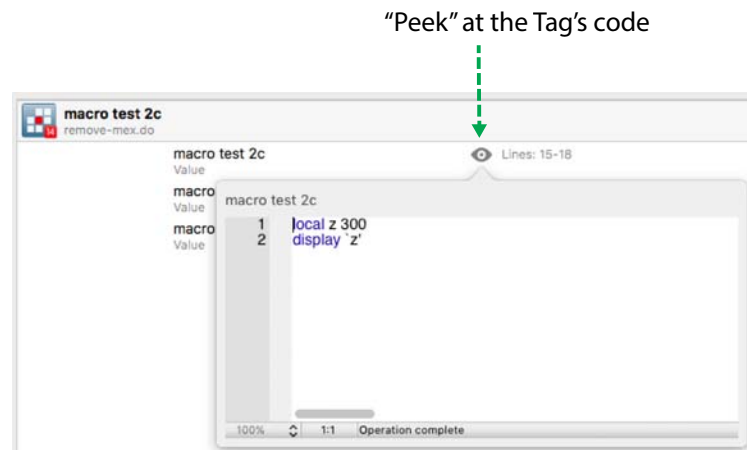
- 1) Click on **"Duplicate Tags"** in the Tag Dashboard
- 2) The activity panel will display the details of the duplicate tags, grouped by the related code file(s). You can click on the eye icon to "peek" at the code and quickly review the tag.
- 3) **Double-click on one of the tags** to open the tag editor
- 4) **Rename the tag** in the tag editor and then save

# StatTag macOS Version 1.0 User's Guide

Review the duplicate tags by selecting “Duplicate Tags” in the Tag Dashboard

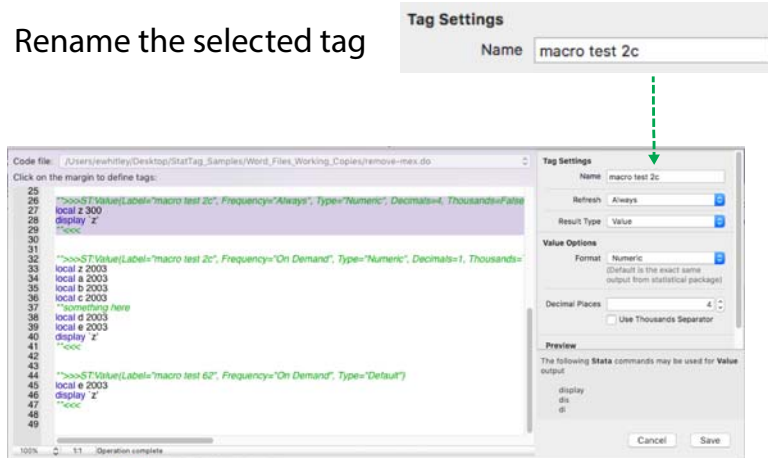


Do a quick inspection of the tags by “peeking” at an individual tag’s code.



Once you have selected a tag you wish to rename, double-click the tag in the list to open the Tag Editor. Provide a new name and save the tag.

Rename the selected tag



## 4.0 Defining Tags



### 4.1 Structure

A Tag is a unit of statistical output from your Code File that you would like to treat as a unique, reproducible data element. Tags in your code file(s) identify numbers, tables, figures, or verbatim output (raw output from the statistical program console) that you would like to embed in your Word document.

A tag is defined by three components, which make up the “identity” for a tag:

- **Code File:** The source statistical code file where the tag is defined
- **Tag name:** The unique, user-friendly name for a tag
- **Tag format:** The combination of attributes that define how a tag’s output should be formatted within a Microsoft Word document

Tag names should be unique within code files and, ideally, unique across the document (although the latter is not required, it’s suggested to avoid potential confusion and so that it’s easier for users to quickly identify tags). Four types of results can be tagged.

Type		
		
Numeric Values	<code>display</code>	Any command that returns a value
Tables	<code>matrix list</code>	Any command that returns a data frame, matrix, vector or list
Figures	<code>graph export</code>	pdf, win.metafile, png, jpeg, bmp, postscript
Verbatim	<code>Any Code</code>	Any Code

In order to return results from your statistical analysis to Word, your results must be created and either printed to the results window of your statistical program or to file through one of the above commands, and encapsulated in a tag. Other lines in your statistical code should not be encapsulated by tags, as they may cause errors.

## Values

Values are returned to StatTag and then inserted into Word with the `display` (Stata) command or R commands that return a number. The `display` command is used in Stata code to print strings or scalar values to the results window. This command will not return data in any other format, such as a matrix or table.



The `display` command is typically used in Stata code with the `return` command to retrieve stored results, or with local or global macro variables.



R commands that return a single value (e.g., `print`) may be used. If the value returned has more than one element (such as a vector), only the first element will be used.

## Tables

Tables are returned to Word with the `matrix list` (Stata) command or R commands that return a collection of values.



The `matrix list` command is used in Stata code to print a matrix to the results window. The `matrix list` command is typically used after creation of a matrix with the `mkmat`, `matrix define`, `estout`, or `estimates table` commands.



R commands that return a collection of values (data frame, matrix, vector, or list) can be used as table results by StatTag.

## Figure

Figures are returned to Word with the `graph export` (Stata) command or common file format commands other than pdf (R).



The `graph export` command is used in Stata code to save a graph or figure to file outside of Stata, the location of which is specified by the user. StatTag will retrieve the file to insert into Word. The `graph export` command expects a pathway and file name to be specified along with the file format, and the `replace` option to overwrite an existing file as required. The command will export the last graph rendered in Stata.



The `win.metafile`, `png`, `jpeg`, `bmp` and `postscript` commands are used by R to save a graph or figure to a file outside of R, the location of which is specified by the user. StatTag will retrieve the file to insert into Word. StatTag cannot currently return a document generated with pdf.

## Verbatim

Verbatim results echo any printed output within the statistical program. Inserted output will be formatted text in a text box. The inserted text may be further formatted in Word.





Tagging code as verbatim in Stata will result in the insertion of any output printed to the Stata results screen.



Tagging code as verbatim in R will result in the insertion of any output printed to the R console.

## 4.2 Syntax

A tag always starts with `**>>>ST:Value(Label=" ", Frequency="",...)` and may contain additional information based on the type of tag (number, table, or figure) it identifies. The tag always ends with `**<<<`. Examples of tags for a numeric value, a table, a figure and verbatim output are listed below.

```
**>>>ST:Value(Label=" ", Frequency="", Type="")
code
**<<<
```

```
**>>>ST:Table(Label="", Frequency="", Type="", AllowInvalid=True, Decimals=0,
Thousands=False)
code
**<<<
```

```
**>>>ST:Figure(Label="", Frequency="")
code
**<<<
```

```
**>>>ST:Verbatim(Label="", Frequency="")
code
**<<<
```

If tags are made through StatTag, the text ("`***>>> ... **<<<`") will be written into your statistical code by the plug-in. The Label, Frequency, Type and Table parameters are inserted with the opening and closing tags by StatTag. For the more advanced user, you can also directly write tags into your statistical code. If written by hand in the statistical code, you must write both the opening and closing tags, and provide a tag name for each tag.



**Note:** Tags cannot be nested within each other. A tag should encapsulate exactly one keyword command (i.e. `display`, `matrix list`, etc.)

## 4.3 Tag Editor

The tag editor drives interaction with StatTag. It is where tag are defined within a referenced code file and information is added to enable StatTag to link output to your Microsoft Word document.

There are three steps to defining a tag:

1. **Choose a code file**

## StatTag macOS Version 1.0 User's Guide

- a. Let StatTag know where this tag should be defined. You will be able to choose any of the accessible code files you have already linked to your document.
2. **Select the block of code** within your code file where the tag should obtain data
  - a. Once a code file is selected, its contents should appear in the code editor
  - b. Click on the margin and highlight the block you wish to use to for your tag
3. **Define your tag's settings**, these drive how the result is formatted when your statistical findings are emitted to the Microsoft Word document
  - a. **Provide a tag name.** The tag name is used by StatTag to help you manage tags and has no impact on the formatted results in Word. The name must be unique within the selected code file.
  - b. **Choose a result type.** This is the way you'd like StatTag to understand the data coming back from your statistical program. StatTag will accept values, figures and tables.

The code file where the tag is defined

Tag Settings

The screenshot shows the StatTag application window. The top menu bar includes 'Code Files', 'Settings', and 'Tags'. The 'Code Files' menu is open, showing a list of code files. The 'Tags' menu is also open, showing a list of tags. The 'Code file:' field is set to '/Users/ewhitley/Desktop/StatTag\_Samples/simple-macro-test.do'. The code editor displays the contents of this file, which includes Stata commands and comments. A blue selection box highlights a block of code starting with 'local y 3' and ending with 'matrix list A'. The 'Tag Settings' dialog box is open, showing the 'Name' field set to 'tmp', 'Refresh' set to 'Always', and 'Result Type' set to 'Table'. The 'Table Options' section includes 'Row/Column Filter' (set to 1), 'Exclude' (checked for 'Column(s)' and 'Row(s)'), 'Decimal Places' (set to 0), and 'Use Thousands Separator' (checked). The 'Preview' section shows a table with the value '100,000'. The 'Code file contents' label points to the code editor.



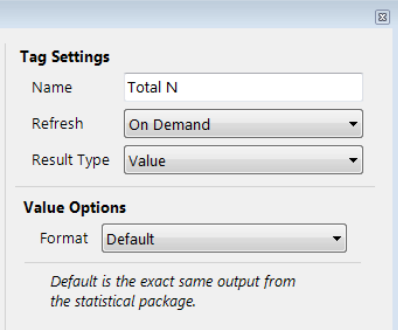
**Note:** saving a tag will cause StatTag to refresh the tag and all associated values within your Microsoft Word document.

## 5.0 Formatting Tags

When a tag is created, its format should be specified accordingly. Options may be selected for either Values or Tables. There are no formatting options for Figures or Verbatim.

## 5.1 Values

Values can be formatted by default (per the exact statistical output), as a number with a specific number of decimal places, as a date/time combination, or as a percentage with a specific number of decimal places. Formatting is selected from the drop down list.



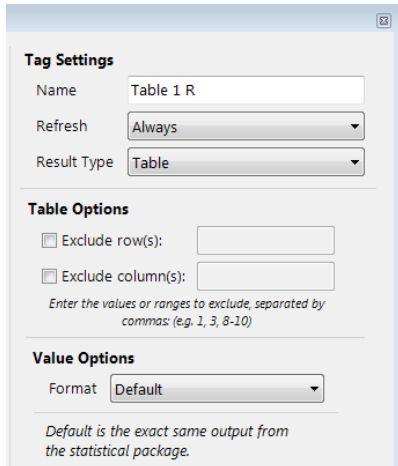
The screenshot shows the 'Tag Settings' dialog for a tag named 'Total N'. The 'Refresh' dropdown is set to 'On Demand' and the 'Result Type' dropdown is set to 'Value'. Below this, the 'Value Options' section shows the 'Format' dropdown set to 'Default'. A note at the bottom states: 'Default is the exact same output from the statistical package.'

## 5.2 Tables

Matrices and tables are inserted to Word through StatTag using different mechanisms depending on the statistical software used. Where data are blank or missing, a "." is returned in the particular cell.

Currently, if any formatting is specified, the formatting is applied to the entire table. Formatting options include specification of the number of decimal places and inclusion of a comma separator for thousands places, which will be applied to all numerical data in the table.

Once inserted to Word, the dimensions (rows and columns) of a table should not be modified by removing or adding columns, as this will cause errors when updating the results. If you change the dimensions of a table, you should delete the table from Word and insert the table again. StatTag allows flexibility in importing tables to exclude rows and columns by number. Using these options, the headers, row names, or specific variables and data can be excluded.



The screenshot shows the 'Tag Settings' dialog for a tag named 'Table 1 R'. The 'Refresh' dropdown is set to 'Always' and the 'Result Type' dropdown is set to 'Table'. Below this, the 'Table Options' section has two checkboxes: 'Exclude row(s):' and 'Exclude column(s):', both of which are currently unchecked. A note below these checkboxes says: 'Enter the values or ranges to exclude, separated by commas: (e.g. 1, 3, 8-10)'. The 'Value Options' section shows the 'Format' dropdown set to 'Default'. A note at the bottom states: 'Default is the exact same output from the statistical package.'



**Tip:** Data from individual cells in an inserted table can be copied elsewhere within the Word document text, and will retain their linkage to the original data. For example, if you wished to include a p-value in the text, copy the result from the table and paste into the text. When the table is updated, the value in the text will be updated as well.

## 5.3 Formatting after insertion

Once inserted, values and tables can be formatted using Word text formatting options, such as changing fonts, bolding, or italicizing. Updating the tags will not affect the applied formatting in Word.

Tags can also be copy and pasted, or cut and pasted to other parts of the text, and will retain their linkage to the statistical code. If your tag is copied or inserted in multiple locations, updates within your statistical code will update every instance of the tag within your text.

Tags can be deleted from the text. Deleting the tag from the text will not delete the tag syntax within your statistical code. To delete the syntax, use the “Remove tags” option in the Manage Tags dialog box.

## 6.0 Troubleshooting

### ***Resolving Code Files with Inaccessible Paths***

StatTag will alert you to inaccessible code files (broken paths). In order to re-link a code file to its updated path you should simply click on the “missing” code file in your code file list. StatTag will provide you the opportunity to re-link to a code file of your choosing. Additionally, you might also choose to remove (-)([delete](#)) the code file then add (+) it back to your document.

### ***Supported File Extensions***

StatTag uses vendor-provided file extensions to determine which files are “code” files. If your statistical code files do not use the standard file extensions set by the vendor, you will not be able to add them to StatTag.

Statistical Package	Supported file extension(s)
Stata	.do
R	.r

### ***If StatTag Doesn't Perform as Expected***

You may find that StatTag doesn't perform as expected. Here are a few common scenarios and approaches to resolving them. If these don't work for you, please let us know and we will address your question as soon as possible.

#### ***A tag displays [NO RESULT] instead of a value***

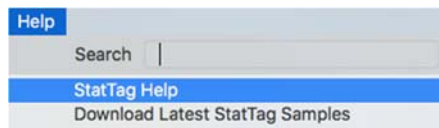
1. Test your code in the statistical package directly (outside of StatTag). See if your code runs or if there are messages that indicate an issue.
2. If your code does run outside of StatTag, check to make sure you're referencing the correct tag type for your output. If you are emitting a matrix, for example, have you selected a “table” tag output type?
3. Has the tag output type changed dramatically since it was initially defined? In particular, have you changed between a single value and table? Radical changes in tag definition may require you to delete and reinsert a tag.
4. It's possible we haven't implemented the package-specific syntax used in your code file. Let us know the command(s) you used (no sensitive data, please!) so we can add it to the enhancement list.

### ***StatTag doesn't show the correct code files or tags***

It's possible that StatTag doesn't show the correct code files or tags if you make manual changes to code files outside of StatTag. This is because StatTag is not yet monitoring code files for real-time changes outside of the application. To resolve, go into StatTag and toggle between active Microsoft Word documents. This will cause StatTag to reload code files related to the selected document.

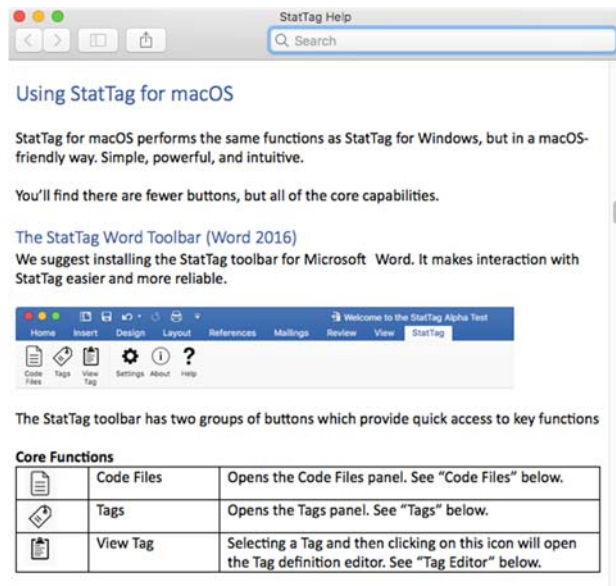
## Help

StatTag provides two options for help, both of which can be found under the “Help” menu.



## StatTag Help

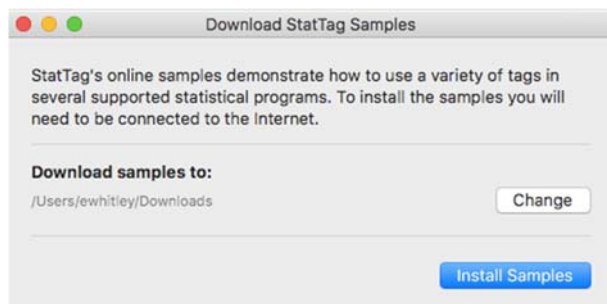
The core content from this document can be found under the “Help” menu. It provides an overview of StatTag’s key concepts and the basic steps to get started.



## Downloading StatTag Samples

StatTag provides sample code files for several statistical applications as well as sample Microsoft Word documents to demonstrate their use. The samples are stored online and distributed via GitHub (<https://github.com/StatTag/Simple-Code-Examples>).

Users can download and extract these sample files from directly within StatTag.



1. Ensure your computer is **connected to the Internet**.
2. Select “**Download Latest StatTag Samples**” from the “Help” menu.

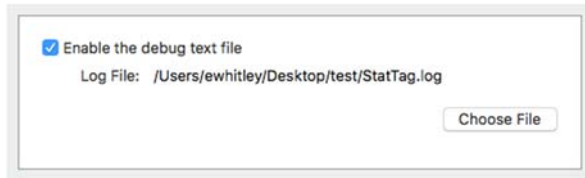
## StatTag macOS Version 1.0 User's Guide

3. Review the location where the samples will be downloaded. By default this is your “Downloads” directory. You may change this location to any folder you can access.
4. Click “**Install Samples**”

### ***Preferences***

Preferences consist of the ability to:

- Enable and manage debug logging - You can turn on debug logging to capture information that will be assist the StatTag developers in trouble-shooting issues you may experience.
  - Enable debug logging
  - Set a debug log file path



## 7.0 Acknowledgements

Development of StatTag and this user's guide was supported, in part, by the National Institutes of Health's [National Center for Advancing Translational Sciences](#), Grant Number UL1TR001422. The content is solely the responsibility of the developers and does not necessarily represent the official views of the National Institutes of Health.

StatTag was inspired in part by the Stata Automation Report project:

Lo Magno, G.L. (2013). Sar: Automatic generation of statistical reports using Stata and Microsoft Word for Windows. The Stata Journal, 13(1); 39-64.

StatTag makes use of the following open source projects (licenses in [Appendix I](#)):

- Scintilla - <http://www.scintilla.org/>
- ScintillaNET - <https://github.com/jacobslusser/ScintillaNET>
- Json.NET - <http://www.newtonsoft.com/json>
- SASHarness - <https://github.com/cjdinger/SasHarness>
  - Hemedinger, C. (2013). Create Your Own Client Apps Using SAS® Integration Technologies. SAS Global Forum 2013. Paper 003-2013.
- R.NET - <https://github.com/jmp75/rdotnet>
- CHCSVParser - <https://github.com/davedelong/CHCSVParser>
- XlsxReaderWriter - <https://github.com/renebigot/XlsxReaderWriter>

*Use of these projects does not imply endorsement of StatTag by the respective project owners, or endorsement of the use of these projects by Northwestern University.*



## Appendix A. Future Enhancements

### ***Some features are not yet fully implemented***

This is a very early test version of StatTag. Some features are incomplete or not yet implemented.

- Word Toolbar (Microsoft Word 2011)
  - The toolbar for Word 2011 is not supported
- Tag Management
  - “Always” Refresh Tag
    - Not yet implemented. Tags must be manually refreshed and will not auto-refresh when a document is opened in Word
- Logging
  - Currently logging minimal information

### ***StatTag for macOS supports Stata and R only***

There is no macOS-compatible version of SAS that supports integration with 3<sup>rd</sup> party applications.

### ***StatTag may not function correctly if more than one instance of Microsoft Word is running***

On macOS it is possible to run both Microsoft Word 2011 and Microsoft Word 2016 at the same time. In this case StatTag will not necessarily know which you intended to use. Both may be installed, but only one should be actively running if you wish to use StatTag.

### ***You can disrupt StatTag by interrupting document updates in Word***

On the macOS version of StatTag it is not possible to disable access to Microsoft Word while a document is being updated. Should a document be modified or closed while StatTag is inserting or updating tags, undesirable issues may occur. Users should refrain from interacting with the active Microsoft Word document until StatTag is finished inserting or updating tags.

### ***Native Stata dates are not properly interpreted***

Currently, “native” (non-formatted) dates are not properly interpreted by StatTag. If you wish to use a Stata-based date in StatTag you may format it as a string and tag it as a StatTag “date” tag. StatTag should then be able to properly utilize the date in your Word document.

### ***Accessing StatTag code files or tags from the Microsoft Word toolbar may be slow***

You may see the macOS “spinning beach ball” due to slow performance when accessing StatTag’s code files or tags from the Microsoft Word toolbar. This will be resolved in subsequent releases.



***Launching StatTag launches Microsoft Word***

Currently, launching StatTag will cause Microsoft Word to launch if it is not already running. This will be addressed in subsequent releases.

***While StatTag is working, you will see the screen update in Microsoft Word***

During tag inserts and updates you will see the screen refresh as StatTag moves from tag to tag to update values. This is due to the way Microsoft Word functions on macOS.

***When StatTag communicates with Stata, Stata will come to the foreground***

On macOS, when StatTag runs a code file in an external statistical program such as Stata, that external application will launch and come to the foreground of the user's desktop. This is by design. By default, Apple security policies cause external applications to become visible when asked to do work. When StatTag requests other applications run a code file, those applications must visibly launch.

## Appendix B. Licenses

### ***License for StatTag***

The MIT License (MIT)

Copyright (c) 2016, Northwestern University, All Rights Reserved

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

### ***License for Scintilla and SciTE***

License for Scintilla and SciTE

Copyright 1998-2003 by Neil Hodgson [neilh@scintilla.org](mailto:neilh@scintilla.org), All Rights Reserved

Permission to use, copy, modify, and distribute this software and its documentation for any purpose and without fee is hereby granted, provided that the above copyright notice appear in all copies and that both that copyright notice and this permission notice appear in supporting documentation.

NEIL HODGSON DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS, IN NO EVENT SHALL NEIL HODGSON BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

### ***License for ScintillaNET***

The MIT License (MIT)

Copyright (c) 2016, Jacob Slusser, <https://github.com/jacobslusser>

## StatTag macOS Version 1.0 User's Guide

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

### ***License for Json.NET***

The MIT License (MIT)

Copyright (c) 2007 James Newton-King

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

### ***License for R.NET***

New BSD License (BSD)

Copyright (c) 2010, RecycleBin

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

## StatTag macOS Version 1.0 User's Guide

\* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

\* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

### ***License for ScintillaNET Find & Replace Dialog***

MIT License

Copyright (c) 2017 Steve Towner

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

### ***License for log4net***

Apache License

Version 2.0, January 2004

<http://www.apache.org/licenses/>

## TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

### 1. Definitions.

## StatTag macOS Version 1.0 User's Guide

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable

## StatTag macOS Version 1.0 User's Guide

copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

## StatTag macOS Version 1.0 User's Guide

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

### END OF TERMS AND CONDITIONS

#### APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License.

You may obtain a copy of the License at <http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

## ***License for EPPlus***

GNU LESSER GENERAL PUBLIC LICENSE

Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <<http://fsf.org/>>

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

This version of the GNU Lesser General Public License incorporates the terms and conditions of version 3 of the GNU General Public License, supplemented by the additional permissions listed below.

### 0. Additional Definitions.

As used herein, "this License" refers to version 3 of the GNU Lesser General Public License, and the "GNU GPL" refers to version 3 of the GNU General Public License.

"The Library" refers to a covered work governed by this License, other than an Application or a Combined Work as defined below.

An "Application" is any work that makes use of an interface provided by the Library, but which is not otherwise based on the Library. Defining a subclass of a class defined by the Library is deemed a mode of using an interface provided by the Library.

A "Combined Work" is a work produced by combining or linking an Application with the Library. The particular version of the Library with which the Combined Work was made is also called the "Linked Version".

The "Minimal Corresponding Source" for a Combined Work means the Corresponding Source for the Combined Work, excluding any source code for portions of the Combined Work that, considered in isolation, are based on the Application, and not on the Linked Version.

The "Corresponding Application Code" for a Combined Work means the object code and/or source code for the Application, including any data and utility programs needed for reproducing the Combined Work from the Application, but excluding the System Libraries of the Combined Work.

### 1. Exception to Section 3 of the GNU GPL.

You may convey a covered work under sections 3 and 4 of this License without being bound by section 3 of the GNU GPL.

### 2. Conveying Modified Versions.

If you modify a copy of the Library, and, in your modifications, a facility refers to a function or data to be supplied by an Application that uses the facility (other than as an argument passed when the facility is invoked), then you may convey a copy of the modified version:



## StatTag macOS Version 1.0 User's Guide

a) under this License, provided that you make a good faith effort to ensure that, in the event an Application does not supply the function or data, the facility still operates, and performs whatever part of its purpose remains meaningful, or

b) under the GNU GPL, with none of the additional permissions of this License applicable to that copy.

### 3. Object Code Incorporating Material from Library Header Files.

The object code form of an Application may incorporate material from a header file that is part of the Library. You may convey such object code under terms of your choice, provided that, if the incorporated material is not limited to numerical parameters, data structure layouts and accessors, or small macros, inline functions and templates (ten or fewer lines in length), you do both of the following:

a) Give prominent notice with each copy of the object code that the Library is used in it and that the Library and its use are covered by this License.

b) Accompany the object code with a copy of the GNU GPL and this license document.

### 4. Combined Works.

You may convey a Combined Work under terms of your choice that, taken together, effectively do not restrict modification of the portions of the Library contained in the Combined Work and reverse engineering for debugging such modifications, if you also do each of the following:

a) Give prominent notice with each copy of the Combined Work that the Library is used in it and that the Library and its use are covered by this License.

b) Accompany the Combined Work with a copy of the GNU GPL and this license document.

c) For a Combined Work that displays copyright notices during execution, include the copyright notice for the Library among these notices, as well as a reference directing the user to the copies of the GNU GPL and this license document.

d) Do one of the following:

0) Convey the Minimal Corresponding Source under the terms of this License, and the Corresponding Application Code in a form suitable for, and under terms that permit, the user to recombine or relink the Application with a modified version of the Linked Version to produce a modified Combined Work, in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source.

1) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (a) uses at run time a copy of the Library already present on the user's computer system, and (b) will operate properly with a modified version of the Library that is interface-compatible with the Linked Version.

e) Provide Installation Information, but only if you would otherwise be required to provide such information under section 6 of the GNU GPL, and only to the extent that such information is necessary to install and execute a modified version of the Combined Work produced by recombining or relinking the Application with a modified version of the Linked Version. (If you use option 4d0, the Installation Information must accompany the Minimal Corresponding Source and Corresponding Application Code. If

## StatTag macOS Version 1.0 User's Guide

you use option 4d1, you must provide the Installation Information in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source.)

### 5. Combined Libraries.

You may place library facilities that are a work based on the Library side by side in a single library together with other library facilities that are not Applications and are not covered by this License, and convey such a combined library under terms of your choice, if you do both of the following:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities, conveyed under the terms of this License.

b) Give prominent notice with the combined library that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

### 6. Revised Versions of the GNU Lesser General Public License.

The Free Software Foundation may publish revised and/or new versions of the GNU Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library as you received it specifies that a certain numbered version of the GNU Lesser General Public License "or any later version" applies to it, you have the option of following the terms and conditions either of that published version or of any later version published by the Free Software Foundation. If the Library as you received it does not specify a version number of the GNU Lesser General Public License, you may choose any version of the GNU Lesser General Public License ever published by the Free Software Foundation.

If the Library as you received it specifies that a proxy can decide whether future versions of the GNU Lesser General Public License shall apply, that proxy's public statement of acceptance of any version is permanent authorization for you to choose that version for the Library.

## ***License for CHCSVParser***

CHCSVParser

Copyright (c) 2014 Dave DeLong

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR

PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

### ***License for XlsxReaderWriter***

The MIT License (MIT)

Copyright (c) 2014 René BIGOT

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.