MindWare Study Compiler User Guide

Version 1.0

Internet Support

E-mail: sales@mindwaretech.com

Web Address: www.mindwaretech.com

Phone

Ph: (614) 626-4888

Fax: (614) 626-4915

MindWare Technologies LTD.

1020-F Taylor Station Rd. • Gahanna, Oh 43230

Copyright 2011 © by MindWare Technologies LTD. All Rights Reserved.

Safety

Warning Regarding Medical and Clinical Use of MindWare Technologies LTD Products.

MindWare Technologies LTD products are not designed with components and testing for a level of reliability suitable for use in treatment and diagnosis of humans or as critical components in any life support systems whose failure to perform can reasonably be expected to cause significant injury to a human. Applications of MindWare Technologies LTD products involving medical or clinical treatment can create a potential for death or bodily injury caused by product failure, or by errors on the part of the user or application designer. Any use or application of MindWare Technologies LTD products for or involving medical or clinical treatment must be performed by properly trained and qualified medical personnel, and all traditional medical safeguards, equipment, and procedures that are appropriate in the particular situation to prevent serious injury or death should always continue to be used when MindWare Technologies LTD products are being used. MindWare Technologies LTD products are NOT intended to be a substitute for any form of established process, procedure, or equipment used to monitor or safeguard human health and safety in medical or clinical treatment.

Table of Contents

Introduction

The MindWare Study Compiler is an application with the ability to take many output files from various MindWare Analysis Applications and compile them into a single spreadsheet. Once compiled, the statistics can be modified through adding data, removing unwanted columns, filtering, and/or averaging prior to being exported to a tab-delimited text file for use in external statistics packages. Importing output files into the Study Compiler is as easy as selecting the directory which contains the study output data, but first it is important to organize the output data in a way in which the Study Compiler can properly categorize the files by subject.

Directory Structure

In order for the Study Compiler to properly import all output files in a study directory, these output files must first be organized by subject. These folders must be labeled "**Subject #**" where # is replaced with a number corresponding with the subject contained in the folder.
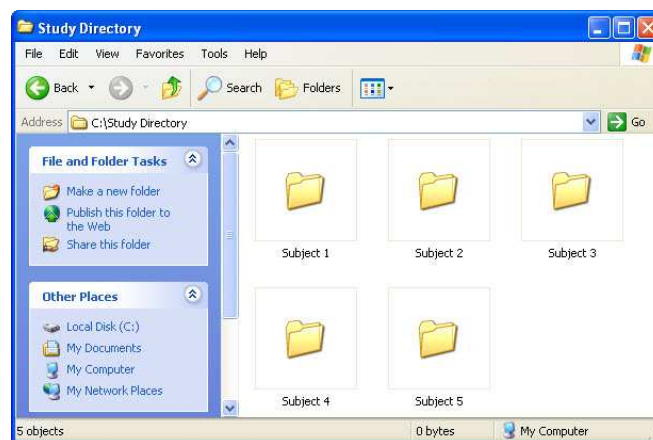
Each of these subject folders should contain the output files from a MindWare Analysis application corresponding to that subject. It is important that only one type of output file be contained within these folders (either IMP, or HRV, or EDA, etc.) as only one type of output file can be loaded at a time. However, many files representing different epochs can be included in a single subject folder as long as they are all output files from the same MindWare Analysis application.
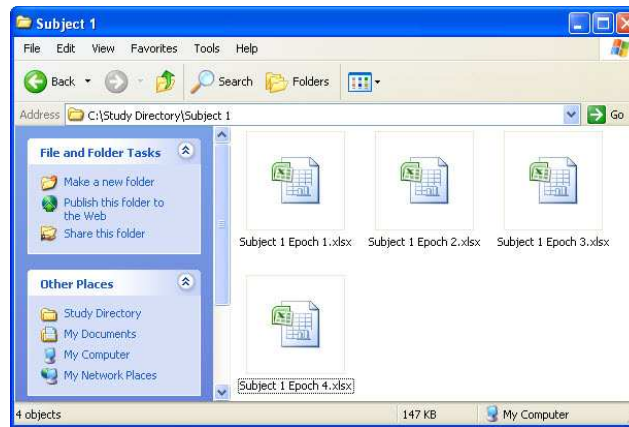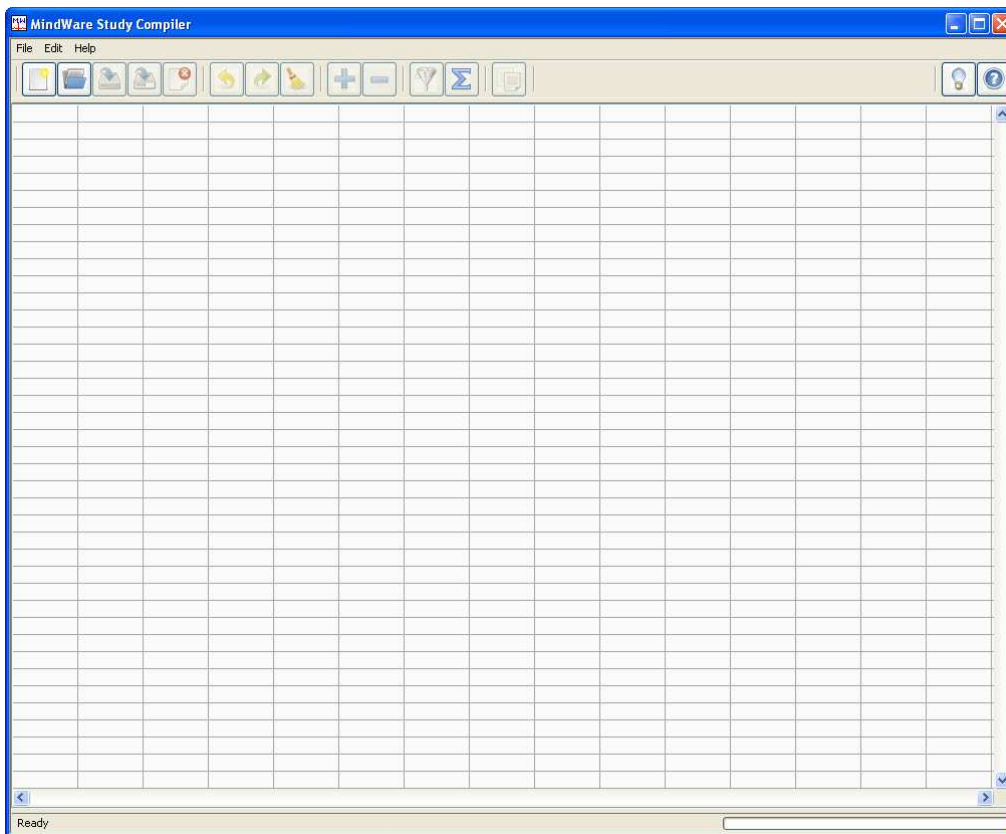
It can be useful to name these output files according to the epoch that they describe (when applicable) as it can help with sorting through the data once it is imported by the Study Compiler.

Once the study data has been organized properly, it can now be properly imported by the Study Compiler.

Study Compiler

The Study Compiler screen contains all available options for importing new studies, opening existing studies, modifying the contents of a study, and exporting the study to a tab-delimited text file.

Below the menu bar is a row of buttons representing all available actions in the Study Compiler application. The status display in the lower left corner of the window displays the current status of the application as well as detailed information on the function of each button when hovered over. The progress bar in the lower right corner shows the progress of the application as it is completing the task at hand.

Importing a Study

To import a study, click the **New Study** button which will bring up a file dialog box. Select the directory containing the study to be imported and press OK. The Study Compiler will now read each of the output files contained in the study directory and compile them into a single spreadsheet.

Depending on the number/size of these files, this step could take several minutes! Check the status and progress displays at the bottom of the window for updates on the file read. Once all files have been read, the Study Compiler will populate the table with the statistics from the new study.

Opening an Existing Study

To open an existing study file (.mwstudy), click the **Open Study** button which will bring up a file dialog. Select the study file you would like to open, and the Study Compiler will populate the table with the current state of the study which has been opened.

Study files can be a very useful way of avoiding long load times when working with many output files or output files which contain a lot of segments. A study file is created when a newly imported study is saved.

Saving a Study

To save the currently opened study, click the **Save Study** or **Save Study As** button. If the currently opened study has not yet been saved, a file dialog will pop up prompting for a new file name regardless of which button is clicked. Click the **Save Study As** button to save a copy of the currently opened study.

Closing a Study

To close a study, click the **Close Study** button. If changes to the file have been made but not yet saved, a prompt will appear asking to either save changes prior to closing or discard these changes and close the study.

Undo/Redo Action

The **Undo** button reloads the state of the study prior to the most recent modification (add/remove columns, filter, etc.). There is a maximum of 5 past states which can be accessed, and beyond this all prior states are not accessible. The **Redo** button reverses the action of the **Undo** button.

Reset Study

If you need to go back more than 5 past states, or wish to start from the freshly created study, clicking the **Reset** button will revert the study back to the state it was when it was first imported. This action is always available **regardless** of what changes have been made to the study since it was first created.

Adding a Column

To add a new column to the study, click the **Add Column** button which opens the **Add Columns** window.
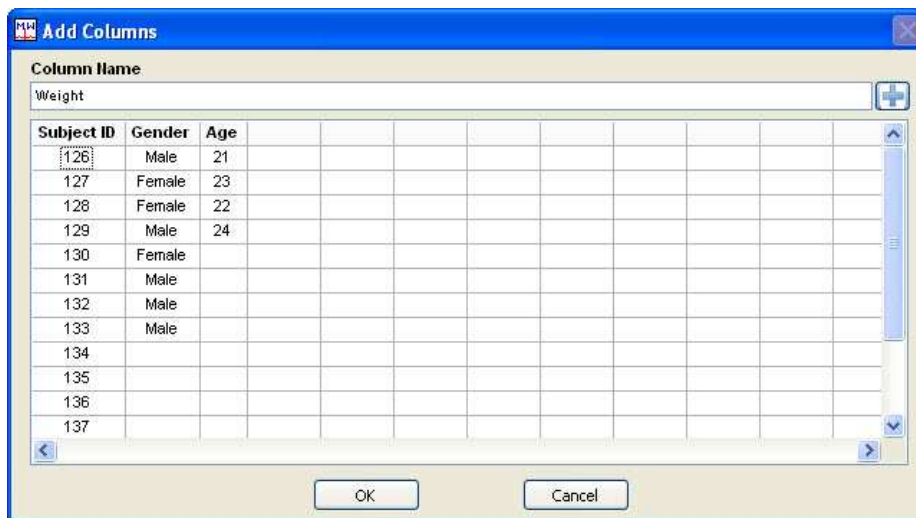
From this window, new columns of data can be added to the study with one entry pertaining to each unique subject. These new columns can contain any kind of data (numeric, text, etc.) and can help further distinguish subjects from one another. A column is added by first specifying a **Column Name** and clicking the add button to add it to the preview window. Then, by selecting each cell in the newly added column data can be added on a subject-by-subject basis. **In order to properly add a new column all subjects must have an entry.**

Pressing OK will return to the Study Compiler and add the newly created columns, while Cancel will disregard all changes made since opening this window.

1020-F Taylor Station Rd. Gahanna, OH 43230

Removing a Column

To delete a column, select it by clicking on the column header and press the **Remove Column** button. When a column is selected it is highlighted in blue. To select multiple columns for removal, hold down **CTRL** as you click the column headers.

The **Subject ID** column can never be removed as it is required to differentiate subjects within the study.

Applying a Filter

Filtering allows for certain areas of interest within a study to be isolated from the rest of the study. Any of the columns present in the study can be used as criteria for filtering. To set up a filter, click the Filter button which brings up the Apply Filter window.

From this window a new filter can be defined and applied to the study. The **Column Name** list describes which column contains the criteria on which the filter is being applied. Contained in this list are the names of every column currently in the study (including user added columns). The **Filter Options** field lists the available types of filters.

For columns containing text data the following filter options are available: **Contains**, **Equal To**, and **Not Equal To**.

For columns containing numeric data the following filter options are available: **Contains**, **Equal To**, **Not Equal To**, **Greater Than**, **Less Than**, **Greater Than or Equal To**, and **Less Than or Equal To**.

The **Value** field specifies the value which you are interested in filtering from the specified column. Multiple filters can be combined in this window through use of the **Filter Modifier** to the left of the 2nd and 3rd filter rows. These filter modifiers follow general Boolean logic. The available modifiers are **AND** and **OR**, allowing for many complex filtering combinations if necessary.

∑ Applying an Average

To apply an average to the current study, click on the **Average** button to bring up the following prompt.
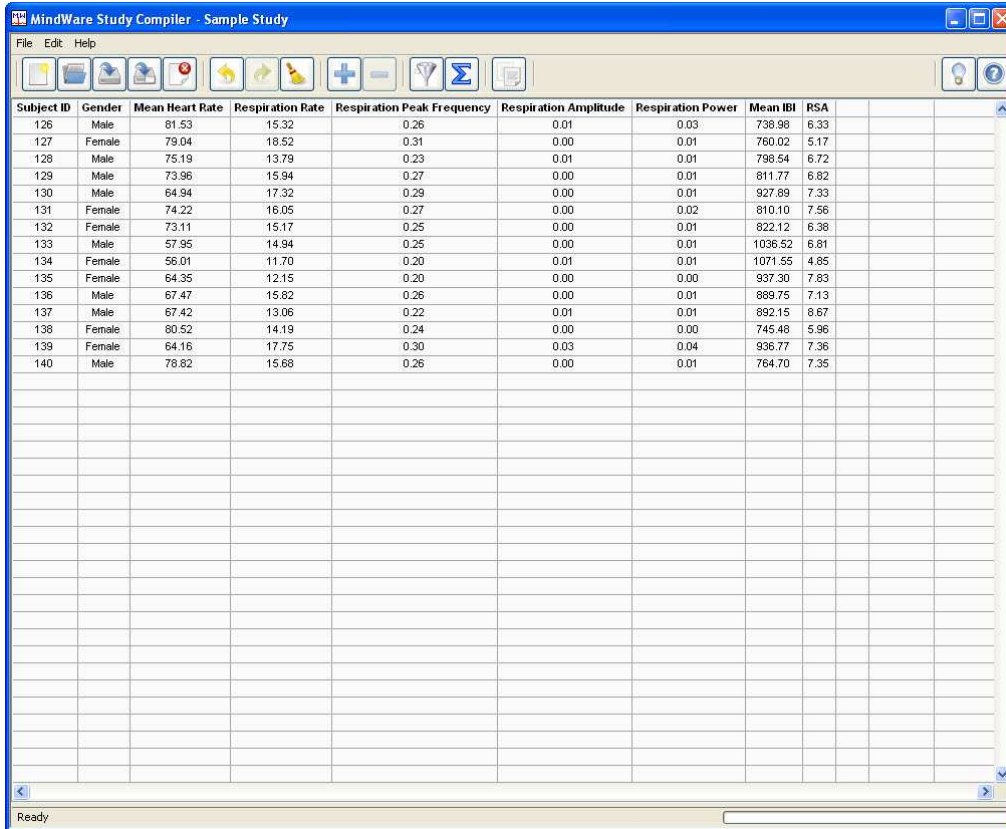

The following averaging options are available:

Subject ID: In this averaging mode, one number will be produced per statistic for each subject in the study representing the average value of all segments and files for that subject.

Subject ID and Segment #: In this averaging mode, one number will be produced per statistic for each segment on a subject-by-subject basis representing the average value for each segment across all files for that subject.

Subject ID and Event: In this averaging mode, one number will be produced per statistic for each unique event on a subject-by-subject basis representing the average value for each event across all files for that subject. This averaging mode is only available when working with event output.

When averaging is applied all columns which no longer apply to the dataset will be automatically removed (e.g. any time an average is applied, the statistics in the study no longer apply to a single file but several files so the **Filename** column is removed).

Exporting Study to Text

Once a study has been sufficiently modified and is ready to be exported to an external statistics package, clicking the **Export to Text** button will write the current study to a tab-delimited text file with the specified name.

In addition to the tab-delimited text file, another summary file is created listing information about the study including the file type, analysis mode, and a list of all output files used in creating the study.

1020-F Taylor Station Rd. Gahanna, OH 43230

About the Study Compiler

Click the **About** button to view information about the Study Compiler.

The **About** window contains information on the current version of the Study Compiler in use as well as contact information for getting in touch with a MindWare representative.

Help

To view the help window, click the **Help** button on the far right of the row of buttons. This will cause the help window to pop up in the upper left hand corner of the window. Hover over various objects on the Study Compiler screen to get in depth descriptions of their functions.

1020-F Taylor Station Road

Gahanna, OH 43230

(614) 626- 4888

www.mindwaretech.com

1020-F Taylor Station Rd. Gahanna, OH 43230