

SOP title: The Observer 5 Project Setup
Date: September 12, 2006

**Iowa State University
Animal Behavior Laboratory**



This form has been designed for completion *before* an experiment commences. The form should be filled out by the student and the major professor. This form serves as an instructional piece to help current and future students know the correct procedure for the ISU behavioral laboratory. To allocate a unique SOP number – students need to check the SOP file held within the behavioral lab.

Standard Operating Procedure (SOP)

Unique SOP Number: 15

Version Number: 1

Year: 2006

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1. Background to SOP: The ability to analyze the data recorded in the field is immeasurably helped with the use of a program named The Observer. It allows one to program behaviors that are linked to keystrokes and are recorded for statistical analysis purposes.

2. Objectives of SOP: To setup and configure a Project in The Observer 5 program.

3. Materials needed: Video recording, PC, The Observer 5 Software, The Observer 5 license dongle (yes that's it's real name).

4. Procedure for set up:

- **Open the Observer 5 program, and if starting a new project (may be an experiment, or a section of one) click on “File” and create either a new workspace or project and title it.**
- **If a Workspace is already active, click on File --> New Project. A dialogue box will appear and allow you to title it, as well as define if it is for a PC or for the Pocket Observer (IPaq use). Click “Save” to keep it.**
- **On the left frame, the project title will appear. Expand the menu and start with “Configuration”. Double click SETTINGS to begin. A dialogue box will appear to allow you to designate if keys will automatically be assigned to behaviors, the duration of the observation, and the recording methods. The**

choices are Continuous, for use when the entire tape will be watched straight through without skipping. Interval States, for when one will skip a set amount of time, record the activity of the animal(s) and then proceed to the next designated time. Interval Events, for recording if a behavior occurred yes or no in a given time frame. One must define the interval for the latter two in this window; it can be adjusted from 1 second up to 59 minutes and 59 seconds. Once satisfied with the settings, click OK.

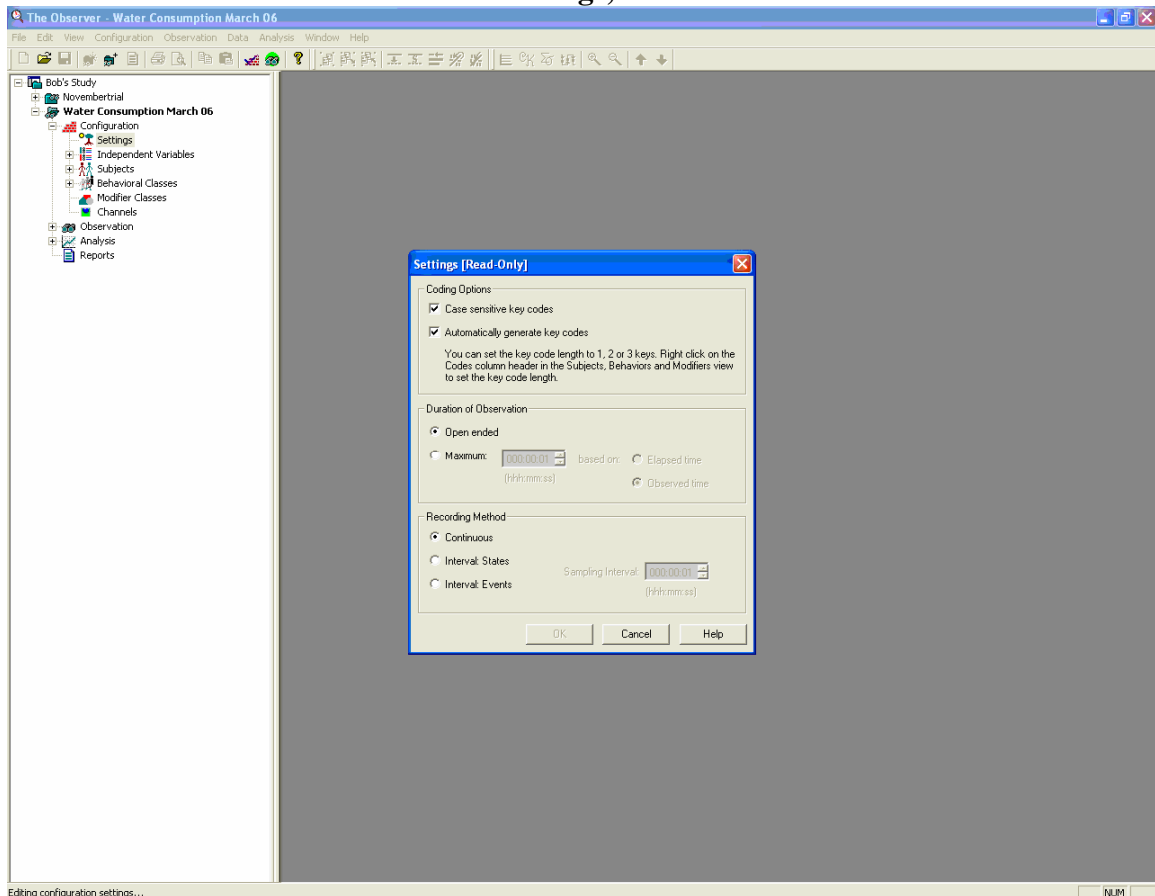


Figure 1: The Settings window, allowing basic parameters for recording to be set.

- Now on the left, move down to “Independent Variables” and double click it to open a window for defining them. These should be carefully considered, since it will help you to organize your data after you’ve analyzed it. Independent Variables are those which could affect the behavior of the animals, but are not affected by the behavior. (E.g. pen number, light regimen, etc)
- Now on the left, double click on “Subjects”. This will open another table window in which one may place the subjects (the individual = subject). Each should be given a designation and a description so that the subject can be easily identified by other people as well. The program will automatically assign an “Unknown Individual” in case a subject comes in and has lost its identifier, or other odd cases. For large groups of individuals, there is a maximum of 32 channels in a later step of the set up process to consider. To

determine how many channels you would have, multiply the number of Subjects by the number of Behavior Classes. If more than 32, then one may have to consider the special case outlined below.

The definition of Subject should be thought on, as one may in cases where there are many individuals use one *subject* as a behavior, and in a later window consider the *individuals* as a behavior. This sidesteps the 32 channels limit of the Observer 5.

- **Now on the left, double click “Behavior Classes”. Behavior Classes is a container for related behaviors and their modifiers. For example, one may have “Motion” as a behavioral class, but then it will have Elements of Walk, Run, Turn, etc. Each Class may be defined as a State or Event behavior. (Period of time vs an instant for a behavior). Each behavior class must have a behavior set as the default state or event; this is done by clicking on “Properties” in the table.**
One must note that states MUST be Mutually Exclusive within a class, and must be complete for the animal (such as having no motion). If another behavior is capable of being expressed while another is observed, then that behavior must be given its own class. (E.g., Motion and Vocalizing) Clicking on “Elements” will open another window in which one may create “Modifiers” which allow one to make very specific behaviors (e.g., run fast vs. run slow)
- **After assigning the behaviors, one is now ready to create the Channels. Again double click on the left menu to open “Channels”, which will open a dialogue box that shows the different subjects in one list and behavior classes in the other. By clicking on the subject and then the behavior classes, one may assign them together and then click the double chevron (>>) button to move them into a channel. 32 channels may be selected, and this is where the consideration of having 32 behaviors (animals) for 1 individual (drink) is advantageous which avoids the limiting number of channels.**
- **Now under the “Configuration” menu at the top, access that and click on “Check Configuration”. The computer will check the configuration you have made to make sure that you’ve filled everything out, and not created any double states, errors, etc. One may look at the Configuration Review, which should be printed off for records in case the template is lost. Click on “Configuration” and then “Configuration Review” to do this.**
- **Double click on “Data Files” in the left menu to open a dialogue box that will allow you to select your desired image file. This should have already been downloaded and converted. Open your desired file and now you are ready to go to the Observation Module.**
- **Click on the “Start Observing” button, or in the top menu bar under “Observation”. This will close the current window, and bring up a new one called “Observation Module”. This is where one views the video and records the keystrokes. Set up your windows as you desire for comfort, using a double click on the grey areas of any of them to access some advanced options for them.**

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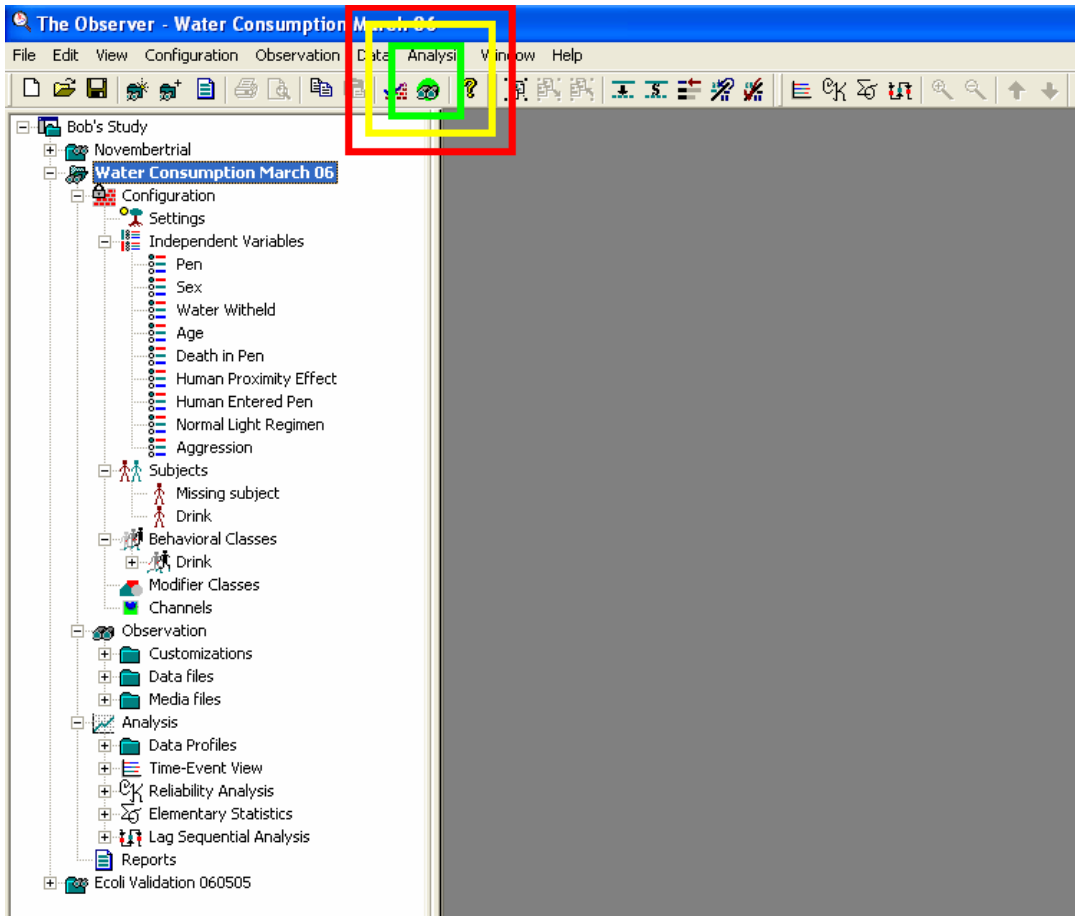


Figure 2: Start Observation Button highlighted for reference. Clicking this button will command The Observer to convert to the Observation Module.

- Click the “Start Observation” under the Data option from the top menu, or the green “GO” button in the upper toolbar. The video, counter, etc will begin after a box for the Independent Variables has been shown so you may select what you know will happen or is constant and selectable in this run. **START DATA ENTRY AT THIS POINT.** If the shuttle keyboard has been programmed, it may be used. Use the various key combinations from the coding scheme you developed in the Configuration to record your observations.
- If an observation was entered wrong, don’t panic. Pause the video, and there are multiple ways to edit the observation data. On the toolbar, click “Data”, and click on “Edit Observation”, or you can simply click on the blue notepad with red pen icon on the icon tray below the toolbar. Select the entry that you need removed and press delete on the keyboard. Then either click the blue notepad with red pen icon, or go to “Data” and uncheck the “Edit Observation” selection. Before you go back to observing, rewind the clip until the red arrow moves up a level indicating that the place you are watching has already been scored.
- To stop, simply click on the “End Observation” button. It will ask you if you want to end the observation and then if you want to edit any of the independent variables. Do as required and then it will close when you click “OK”. Note: If the clip is allowed to run to the end of its duration on its own, it may reset the counters in the system and cause an error in the duration counting. Stop the clip manually to preserve the time stamp in the data file that is made during coding.
- If you leave the Observation Module, it will ask you if you want to keep your configuration, click yes or it will revert to the default module next time you try to access it. It will then revert back to the Observer main screen. If it has any double states, it will inform you of it and merge them into one.

5. Trouble Shooting:

If, after working on the configuration and it has been locked out for changes by the program, one may unlock it for altering the setup. Click on the “Configuration” menu option at the top, and then “Unlock Configuration...” If this is done after data has been collected, it will remove them from association with the program temporarily. It does NOT mean that it has deleted them or anything, and it will return them when you have finished editing the Configuration.

6. Helpful web links or contact numbers for technical help:

Noldus Information Technology:

Tiffany Mayton (Tech Support): support@noldus.com

Bart Van Roekel: bart@noldus.com

Wilant Vangiessen: wilant@noldus.com

Attention:

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