The Observer® XT

Quick Start Guide

Using The Observer XT
for studying human behavior

Noldus
Information Technology
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1 Up and Running quickly

Thank you for purchasing The Observer XT. You are now the owner of a highly advanced system for the collection, management and analysis of observational data. We hope that you enjoy using the system and that you will benefit from it in your research.

Using this Quick Start Guide

Before you start using this Quick Start Guide, we would like to point out the following:

- We assume that you are familiar with the basic operations of Windows XP or Vista.
- Only the most basic features of The Observer XT are addressed in this guide. Inevitably, some features that may be vital to your application are not discussed. Where possible, a reference to the Reference Manual is given for additional information.

You can also access the printed documentation from your computer desktop. The Quick Start Guide and the Reference Manual are stored as PDF files on your PC, if you installed them (see Section 2.2 of The Observer XT 9.0 Reference Manual).

To access the PDF files, from the Windows Start menu select All Programs, Noldus, The Observer XT 9.0 and then Documentation.

In The Observer XT, from the Help menu, select Video Tutorial. Watch the tutorial to learn about how to set up an observational study in The Observer XT 9.0.
2 Getting Started

Working with Projects

A project is the container of all information related to an experimental setup. A project contains a coding scheme and independent variables, but can have more than one observation.

You can create as many projects as you want. You can open one project at a time. Once you have opened your project, you can view its content in the Project Explorer (see Figure 1 below).

![Figure 1](image.png)

Figure 1. The main window of The Observer XT. The Project Explorer on the left contains the main items Setup, Observations and Analysis. The Components view (grey area) contains the Project Setup menu.
Creating a Project

1 When you start The Observer, click The Observer XT project under Create a new project in the window that appears.

2 Give your project a name.

3 Click the Browse button to specify a location on your PC where you want the project to be stored, or accept the default location.

4 Click the OK button. The New Project box closes and the project is displayed in the Project Explorer.

5 The Project window shows the main components: Setup, Observe and Analyze.

- For more information about projects, see Chapters 4 and 15 of The Observer XT 9.0 Reference Manual.
- To import an existing project from The Observer 4/5 versions, see Section 12.1 of The Observer XT 9.0 Reference Manual.

The sample projects

The sample projects are stored on the Observer XT Sample Projects DVD for human research that came with the software. Nine of them are about human behavior (from the field of psychology, usability and ergonomics):

- **A bad day in the office** — In this project we see an office worker suffering from a badly designed system, which leads to frustration, and in his case, aggression. It is meant as an illustration of the importance of user-centered design, a design methodology that places the needs of the user in the center of the system design process.

- **Greeting rituals** — In this sample project we are observing people greeting each other in the arrivals hall of an international airport.

- **Kids at play** — This sample project concerns the behavior of two children, Suzanne and Erin, observed at different ages.

- **Parent-child interaction** — This sample project shows the interaction between a 6-year old girl, Suzanne, and her father. Suzanne is offered a chest of drawers full of toys. Her behavior is videotaped and her heart rate is measured using a Polar heart rate monitor.

- **Discussion** — This sample project shows a discussion between an employee and her boss how to best deal with a personal problem of the employee. The body language (both body postures and gestures) of both the boss and the employee has been coded in detail.
Section 2

- **RSI Research** — This sample project illustrates the use of detailed video analysis for the study of complex and rapid behaviors. The case study concerns an experimental setup designed for systematic observation of movements of wrist, elbow and shoulder joints that are liable to cause repetitive strain injury (RSI).

- **Chat application** — This sample project consists of a simulated usability test of a software applications Windows Messenger and Skype. The movie file shows the captured image of the participant’s computer, with a close-up of the participant's face displayed in an insert window. The screen capture was produced with the Screen Capture Module, a software-based tool that generates a digital media file directly from the screen display. uLog was used to log keyboard-related behaviors.

- **Usability testing of cars** — This project illustrates how you can use The Observer XT to code and analyze the behavior of a driver. The accompanying video footage has been taken from a camera and an eye-tracking device that the driver was wearing during the test. The gaze point of the driver was then superimposed on the video image to help the observer record manually where the driver is looking at. This way one can combine gazing behavior with route characteristics, driving behavior and other data like car speed that can be imported in The Observer.

- **Car race game** — This project is an example of the use of The Observer in gaming research. It focuses on quantifying performance of computer game players in relation for example to their gaming experience or age. Each player is asked to play an online car race game a number of times. The observer can score data from two video files, one showing the computer screen with a close-up of the participant’s face displayed in an insert window, and the other displaying the gaze point recorded with an eye-tracking device. Computer events like key presses are also recorded with uLog, and imported as separate event logs within the observation. Furthermore, ECG is measured from each player, so it is possible to relate player’s behavior to changes in ECG activity.

For more information on the sample projects, see the Description of Sample Projects of The Observer XT on the Sample Projects DVD for human research.

Keep in mind that there are many ways to create a coding scheme, select data and analyze them. A sample project is only an example of the many possibilities, all of which depend on the needs of your research.
Using The Observer from start to finish

1 Set up the project to specify whether you observe a live scene or from video, how you record data, and other options. ➔ page 10

2 Design your coding scheme and define the independent variables important for your study. ➔ page 11

3 Start an observation and collect data. ➔ page 18

   If necessary, refine your coding scheme by adding elements or changing their properties. For example, add a behavior you had not considered when designing the coding scheme.

4 Select data to create a data profile. The data profile is shown in form of a sequence of selection filters (see Section 7.1 of the Reference Manual). ➔ page 25

5 Visualize your data in the form of charts, tables, and video highlights. ➔ page 28

6 Carry out analysis. ➔ page 30

7 If necessary, export the data and analysis result to other programs for further analysis, or to add them to a presentation. ➔ page 35
Setting up your project

Before you begin working with a project, you can customize The Observer in several ways. For more information, see Section 4.1 of The Observer XT 9.0 Reference Manual.

When you create a new project, the Project window appears. The three tabs in the Project window guide you through project settings. You start with setting the Project setup. Next, use the navigation pane at the bottom of the screen to move through the Project settings.

Project setup

Click Set up project in the Project window or Project Setup in the Project Explorer.

In the Project Setup, you specify:

- The Observation source (Live or From video). In this section you also specify whether you record additional data (for example, physiological data) or video as you observe, and whether you want other programs to work together with The Observer XT.

  If you plan to record video from a video camera connected to your computer or capture the screen of another computer, connect the video device before starting The Observer XT. Select Live, and select the video device. We advise you to record video to DivX format.

- The Observation method (Continuous sampling, Instantaneous sampling or a combination of the two methods).
  - With continuous sampling, the event scored receives the actual time at which it has been entered.
  - With Instantaneous sampling, the event scored receives the time code of the sample point it belongs to.
  - You can combine the two methods by scoring one or few focal subjects with Continuous sampling, and others with Instantaneous sampling.

- The Observation duration (open ended or limited by a maximum duration).

For more information about the Project Setup, see Section 4.3 of The Observer XT 9.0 Reference Manual.
Defining the Coding Scheme

In the coding scheme you define the behaviors and events you want to score and the subjects who perform those behaviors. For example:

Child Smiles.

You define Child as a Subject, and Smile as a Behavior.

- For a proper scientific study, the best practice is to use a pre-defined coding scheme. You can alter a coding scheme whilst designing an experiment, but you should not compare data across observations made with different coding schemes.
- Contrary to The Observer 5, in The Observer XT the coding scheme is not necessary to carry out an observation. You can record data by typing free text in the Comments column of the Event Log (see Section 5.4 of The Observer XT 9.0 Reference Manual). However, remember that The Observer does not calculate statistics on such data!

How to define a coding scheme

1. If you score events for two or more individuals during an observation, list them in your project and assign key codes to them in the Subjects view (see below).

   If you score behaviors of one individual in each observation, you do not need to define Subjects. When you score data, it is implicit that all events belong to that subject. However, remember to define an independent variable (see page 19) that specifies the name of the individual for each observation.

2. List the behaviors and assign key codes to them in the Behaviors view. If two or more behaviors are related to each other, you can put them in a Behavior group (see page 13).

3. If a behavior requires modifiers (that is, attributes that can change during an observation, for example some detail to be added to the behavior), click the button in the Modifiers column (see page 15), and define modifiers for that behavior.

4. Check the coding scheme for errors and correct errors if there are any (see page 17).
Subjects

All possible individuals that perform a behavior must be defined as Subjects.

1. In the Project setup window, from the Setup menu, click Coding Scheme.
2. Click the Add Subject button, enter its Name and a Start key code.

If you only have one subject per observation, you do not need to use subjects in your coding scheme.

If you combine the Continuous recording method with the Instantaneous sampling method, you can assign subjects to either methods, for example a focal subject to Continuous and other subjects to Instantaneous sampling.

If you score behaviors for two or more subjects in one observation, creating separate Subjects is not strictly necessary. To distinguish behaviors initiated by different individuals, you could define behavior categories specific for different individuals. For example, if your research involves studying the interaction behaviors between a parent and child (see Figure 2 above), you can define the following behaviors Parent picks up object, Child picks up object, Parent smiles, Child smiles, etc., This way Parent and Child do not need to be defined as Subjects, making scoring more efficient.

In general, you can choose between two strategies to code subjects and behaviors:

- Define subjects, as many as there are individuals in an observation session. For example, Parent, Child 1, Child 2. For each behavior type define a behavior (see the below).
- For each behavior type, define as many behaviors as individuals in an observation session, and give them unique names. For example, Child 1 talks and Child 2 talks. Do not define subjects.

![Figure 2. Defining subjects in the Subjects view. Two Subjects have been defined in this example.](image-url)
The second strategy has the main advantage that you reduce the number of key presses necessary to score an event. On the other hand, it increases the number of behaviors in your coding scheme.

Whatever strategy you decide to apply, you probably wish to identify individuals in each observation session. For example, you want to know the names of the two or more children in a certain observation. Define as many independent variables (see page 19) as individuals in a single observation session, for example Name of Child 1 and Name of Child 2 for two children in your observation. Then you can enter the names for every observation.

**Behaviors**

1. To open the Coding Scheme, in the Project Explorer, click Coding Scheme.

2. If you have chosen the Continuous sampling method, in the Behaviors view, click the Add Behavior group button. In the New behavior group window, you can select either:
   - **Mutually exclusive states** — Use this type of group to define behaviors that cannot occur at the same time. A behavior group with mutually exclusive elements corresponds to a Behavioral Class in The Observer 4/5.
   - **Start-stop states** — Behaviors in this group can occur at the same time. You have to manually stop a behavior. Choose this option also if all the behaviors of this group are Point events (that is, with no duration).

   If you have chosen the Instantaneous sampling method, in the Behaviors view, click the Add sample group button.

   If you have chosen to combine Continuous sampling and Instantaneous sampling, click the Add Behavior group button.

3. Next to Group name, enter the name of the behavior or sample group.

4. Under Behaviors, add the behaviors (or samples) that form the group. For Continuous sampling, specify whether each behavior is an Initial State Event, a State event or a Point event (see the next page). If you use Instantaneous sampling, all samples are considered automatically as State events with duration equal to the sample interval.

5. When ready, click Create group. You can now assign the start and/or stop code for each behavior, if necessary.
Types of behaviors

You can define three types of behaviors:

- **State Events** — Behaviors that take a period of time and therefore have a duration. For example, *Typing*. For State Events you can define a **Start** key code and a **Stop** key code. If a State Event belongs to a group of mutually-exclusive behaviors, you only need a **Start** key code, because the start of a subsequent behavior automatically stops the previous behavior.

- **Point Events** — A behavior that only takes an instant in time, or whose duration is not important. For example, *Hit a key on the keyboard*. For Point Events you only define a **Start** key code, not a **Stop** key code.

  If you want a state behavior from a mutually exclusive to be scored automatically at the start of the observation, select **Initial State Event** as Type.

- **Sample** — When scoring data with the Instantaneous sampling, behaviors are assumed to last as long as the current sample interval. For samples you can define a **Start** key code. The start of a new sample automatically stops the current sample (unless you have scored the same behavior at subsequent sample points).

To create a new behavior in an existing group, click **Add behavior** or **Add sample** (depending on the observation method).

<table>
<thead>
<tr>
<th>Behavior Name</th>
<th>Type</th>
<th>Modifiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typing</td>
<td>State Event</td>
<td>Object</td>
</tr>
<tr>
<td>Sneak at</td>
<td>State Event</td>
<td>Object</td>
</tr>
<tr>
<td>Sign of despair</td>
<td>State Event</td>
<td>&lt;Click here to add M...</td>
</tr>
<tr>
<td>Slam</td>
<td>State Event</td>
<td>Object</td>
</tr>
<tr>
<td>Pound</td>
<td>State Event</td>
<td>Object</td>
</tr>
<tr>
<td>Retreat</td>
<td>State Event</td>
<td>Object</td>
</tr>
<tr>
<td>Walk away</td>
<td>State Event</td>
<td>&lt;Click here to add M...</td>
</tr>
<tr>
<td>Kick</td>
<td>State Event</td>
<td>Object</td>
</tr>
<tr>
<td>Other behavior</td>
<td>Initial State Event</td>
<td>&lt;Click here to add M...</td>
</tr>
</tbody>
</table>

Figure 3. The **Behaviors** view from the Sample project A bad day in the office.
Examples of Behavior groups

- **Example 1** — To score interactions between two individuals and their body language, you might have the following behavior groups:
  - **Gesture** — With hands together, hand pointing, etc.
  - **Posture** — With upright, leaning forward, etc.
  - **Gaze** — With Looking to, Looking away, etc.

- **Example 2** — In a study of usability testing of cars, you might have the following behavior groups:
  - **Turns** — With behaviors turn right and turn left.
  - **Driver’s gaze** — With behaviors gaze at left mirror, gaze at right mirror, gaze at dashboard, etc.
  - **Car motion** — With behaviors in motion, still.

  If two or more behaviors can occur simultaneously, put them (a) in separate behavior groups or (b) in a start-stop behavior group.

- **Example 3** (for instantaneous sampling) — To quickly record the gaze behavior of two subjects, you might have the sample group **Gaze** with samples Gaze at other subject, Gaze at table, Gaze at book, and Gaze at anywhere else.

**Behavior Modifiers**

Use Modifiers to specify attributes of a behavior that can change during the observation. Modifiers are optional. You can attach one or more modifiers to a behavior, in such a way that when you score a behavior you can also score one or more modifiers.

1. To open the Coding Scheme, in the **Project Explorer**, click **Coding Scheme**.

   To add a modifier, you need to have the **Modifiers** view open: to open the **Modifiers** view, in the **View Settings** pane, select the Modifiers checkbox.

   ![Modifiers view](image)

2. In the **Modifiers** view, click the **Add Modifier group** button.

3. Enter the name of the **Modifier group**, add **Modifiers**, link the **Modifier group** to one or more **Behaviors** and click **Create group**.

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You can now change the start code, if necessary.

### Example of Behavior modifiers

To record what type of play behavior a child exhibits, define the behavior *Play*. Then, in the **Modifiers** view, add a nominal **Modifier group 'Type of play'** and add all relevant types of play (see Figure 4 for an example). Next, in the **Link to Behaviors** table, select the behavior *Play* and click **Create group**. In the **Behaviors** view, the **Modifier group Target** is now listed in the **Modifiers** column.

If you create modifiers, you need more key presses to score a complete event. You can prevent this by re-formulating the behaviors in such a way that they describe all possible combinations between the previous behaviors and their modifiers. For example, instead of defining the behavior *Gaze at* and its modifiers *Keyboard, Monitor* and *Colleague*, define the behaviors *Gaze at Keyboard, Gaze at Monitor* and *Gaze at Colleague*.

For more information on behaviors, see **Behaviors** in Section 4.4 of The Observer XT 9.0 Reference Manual.
Setting up your project

Checking your Coding Scheme

Let The Observer check the validity of your coding scheme, for example to verify that all behaviors have a unique key code. From the Setup menu, select Check Coding Scheme...

For more information on correcting coding scheme errors, see Checking your Coding Scheme in Section 4.4 of The Observer XT 9.0 Reference Manual.

Independent Variables

Independent Variables can potentially influence the observation, and are assumed to remain constant for a certain subject (like a person's gender) or an observation session (like temperature). Define the variables that are important for your study (for example, the location or the social group size).

1 From the Setup menu, select Independent Variables. The Independent Variables List window appears.

2 Click Add User-defined Variable in the top-left corner of that window.

3 Specify Name, Description (optional), Type, Format, Predefined Values (optional), Scope and Value Update for the new variable. Repeat steps 2-3 to add more variables (see Figure 5 for an example).

You can also add system variables, that is, variables automatically provided by the program, like the start time of an observation. Click Show Independent Variables and select the system variables you require.

<table>
<thead>
<tr>
<th>Label</th>
<th>User-defined</th>
<th>User-defined</th>
<th>User-defined</th>
<th>User-defined</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Name of operator</td>
<td>Gender</td>
<td>Age</td>
<td>Workstation</td>
</tr>
<tr>
<td>Type</td>
<td>Text</td>
<td>Text</td>
<td>Numerical</td>
<td>Text</td>
</tr>
<tr>
<td>Format</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Predefined Values</td>
<td>Male, female</td>
<td>From 18 To 60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scope</td>
<td>Event Log</td>
<td>Event Log</td>
<td>Event Log</td>
<td>Event Log</td>
</tr>
<tr>
<td>Value Update</td>
<td>Compulsory</td>
<td>Compulsory</td>
<td>Compulsory</td>
<td>Compulsory</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Oberviation</th>
<th>Event Log</th>
<th>Subject</th>
<th>No.</th>
<th>Name</th>
<th>Gender</th>
<th>Age</th>
<th>Workstation</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL-BOW</td>
<td>Event log001</td>
<td>1</td>
<td>Patrizia</td>
<td>female</td>
<td>38</td>
<td>Ignition welding machine</td>
<td></td>
</tr>
<tr>
<td>EL-B_HI</td>
<td>Event log002</td>
<td>2</td>
<td>Patrizia</td>
<td>female</td>
<td>38</td>
<td>Ignition welding machine</td>
<td></td>
</tr>
</tbody>
</table>

Figure 5. The user-defined variables Name of operator, Gender, Age and Workstation from the Sample project RSI Research.
4 Carrying out an observation

Before you carry out an observation, you can adjust the Observation Settings.

Observation Settings

Observation Settings help you customize the way you record data: for example, you can automatically generate keycodes, set keycodes to required, pause playback of video when scoring, etc.

To open Observation Settings, from the Setup menu, select Observation Settings.

For more information on Observation Settings, see Section 5.2 of The Observer XT 9.0 Reference Manual.

Scoring the events

The following section refers to scoring events with the Continuous Recording method. If you score events with the Instantaneous sampling method, see page 21.

1 Create a new observation by doing one of the following:
   - In the Project window, in the Observe tab, click Create new observation.
   - From the Observe menu select Observation, then New.
   - Press ALT+F6.

   You can also open an existing observation that you scored from video (tape or media file). Simply click the observation in the Project Explorer.

2 If you have specified Offline observation in the Project setup (see page 10), the Video Selection window appears. Select the video file(s) you want to use, and click Open.
Carrying out an observation

If you have the Video Support module, you can score from up to two video files simultaneously. With the Multiple Video extension, you can score from a maximum of four video files simultaneously.

3 The Event Log only shows the columns that apply to your coding scheme and the Comment column. If you want to hide the Comment column during the observation, right-click one of the column titles and de-select Comment.

If some behaviors have been defined as Initial State Event (see page 14), these are scored automatically at time 0, so you do not need to score them again.

For more information on initializing subjects, see Section 5.3 of The Observer XT 9.0 Reference Manual.

4 Start the observation: click the Start Observation button in the Playback control window.

5 In the Enter User Defined Variable values window, enter the values of the independent variables for that observation session.

6 When an event occurs, score data by either clicking the coding scheme elements in the Codes window, or pressing the keyboard keys corresponding to the codes. Score the sequence Subject - Behavior - Modifiers (if applicable). The way you score data depends on whether behaviors are defined as State Events or Point Events; see the notes below.

Scoring State events
- If State behaviors in a group are mutually exclusive, scoring one excludes all others. This means that when you score a behavior, the behavior of the same group that is currently active is stopped automatically. For example, when a child in a playground starts Climbing, click the Start code or press the corresponding key(s).

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Pay attention to when the next behavior starts. Press the key for the new state (in this example, Walking, see below) or click the corresponding Start code. If none of the codes apply to the new state of the subject, define an additional state in the coding scheme.

<table>
<thead>
<tr>
<th>Status</th>
<th>Start key</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locomotion</td>
<td></td>
</tr>
<tr>
<td>Climbing</td>
<td>c</td>
</tr>
<tr>
<td>Walking</td>
<td>w</td>
</tr>
<tr>
<td>Running</td>
<td>r</td>
</tr>
</tbody>
</table>

Result — In the Event Log window, The Observer adds a Start line for the state Climbing (marked by a green triangle), and next a Start line for the new state Walking.

- If State behaviors are Start-Stop, click the Start code or press the corresponding key(s).

<table>
<thead>
<tr>
<th>Status</th>
<th>Start key</th>
<th>Stop key</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play behavior</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-functional use</td>
<td>n</td>
<td>N</td>
</tr>
<tr>
<td>Functional use</td>
<td>f</td>
<td>F</td>
</tr>
<tr>
<td>Break up</td>
<td>b</td>
<td>B</td>
</tr>
<tr>
<td>Put together</td>
<td>t</td>
<td>T</td>
</tr>
</tbody>
</table>

Pay attention to when the behavior ends. On that moment, press the stop key(s) for that behavior, or click the Stop code.

<table>
<thead>
<tr>
<th>Status</th>
<th>Start key</th>
<th>Stop key</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play behavior</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-functional use</td>
<td>n</td>
<td>N</td>
</tr>
<tr>
<td>Functional use</td>
<td>f</td>
<td>F</td>
</tr>
<tr>
<td>Break up</td>
<td>b</td>
<td>B</td>
</tr>
<tr>
<td>Put together</td>
<td>t</td>
<td>T</td>
</tr>
</tbody>
</table>

Result — A Stop line (indicated by a red square) is added for the behavior just ended.

Scoring Point events

To score point events, press the corresponding key(s) or click the Start code. You do not need to stop a Point event.
Carrying out an observation

7 When the observation is finished, click the **Stop Observation** button in the **Playback control** window. The observation is saved automatically after each event line. Do not stop the observation if you just want to re-position the video. To do so, simply operate the Playback buttons.

Scoring events with Instantaneous sampling

1 Create a new observation and select a video file (when applicable).

2 Start the observation.

3 A sound marks the start of the first sample interval. A number of rows appear below the **Start** row. These show each combination between a subject and a behavior group.

<table>
<thead>
<tr>
<th>Event Time</th>
<th>Subject</th>
<th>Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start</td>
<td>Start</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Instantaneous Sample (1)</td>
<td>Vocal communication</td>
</tr>
<tr>
<td>3</td>
<td>Mother</td>
<td>Vocal communication</td>
</tr>
<tr>
<td>4</td>
<td>Mother</td>
<td>Emotion</td>
</tr>
<tr>
<td>5</td>
<td>Twin 1</td>
<td>Vocal communication</td>
</tr>
<tr>
<td>6</td>
<td>Twin 1</td>
<td>Emotion</td>
</tr>
<tr>
<td>7</td>
<td>Twin 2</td>
<td>Vocal communication</td>
</tr>
<tr>
<td>8</td>
<td>Twin 2</td>
<td>Emotion</td>
</tr>
</tbody>
</table>

4 In each row, score the state of the subject for the corresponding behavior group, by either clicking the coding scheme elements in the **Codes** window, or pressing the keyboard keys corresponding to the codes.

For example, score the state **Silent** for the subject **Mother** and the behavior group **Vocal communication**. Next, score the state **Neutral** for the subject **Mother** and the behavior group **Emotion**. The name of the state is displayed under **Behavior**.

<table>
<thead>
<tr>
<th>Event Time</th>
<th>Subject</th>
<th>Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start</td>
<td>Start</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Instantaneous Sample (1)</td>
<td>Vocal communication</td>
</tr>
<tr>
<td>3</td>
<td>Mother</td>
<td>Silent</td>
</tr>
<tr>
<td>4</td>
<td>Mother</td>
<td>Neutral</td>
</tr>
<tr>
<td>5</td>
<td>Twin 1</td>
<td>Vocal communication</td>
</tr>
<tr>
<td>6</td>
<td>Twin 1</td>
<td>Emotion</td>
</tr>
<tr>
<td>7</td>
<td>Twin 2</td>
<td>Vocal communication</td>
</tr>
<tr>
<td>8</td>
<td>Twin 2</td>
<td>Emotion</td>
</tr>
</tbody>
</table>
5 When the next sample comes, a new group of rows appears below. Score the states as in the previous step. If the state of the subject has not changed from the last sample, score the state anyway.

If you do not want to score the state of the subject for that sample, click another cell under Behavior to score the state for another subject/behavior group.

6 When the observation is finished, click the Stop Observation button in the Playback control window.

You can also score data combining Instantaneous sampling with Continuous recording. See Section 4.3 of The Observer XT 9.0 Reference Manual.

Controlling the video

If you use video files, operate the black buttons on the Playback control window to play back and forward the video, at the speed you require.

Finding events

You can search for specific events, events that share some elements (for example, the same subject), or free text entered in the Comments column of the event log. To search for events, press Ctrl+F.

Adding elements to the coding scheme as you observe

Click Add Behavior... at the bottom of the codes window.

In the Add Behavior window (Figure 6), you can enter the name and the keycode of the new element, and select the type of Behavior and to which group you want to add the behavior.

You can also create a new subject, a new behavior group, a new modifier or modifier group while observing.

To modify an existing coding scheme element, you first need to stop the observation; then click the Coding Scheme in the Project Explorer.
Carrying out an observation

For more information, browse The Observer XT 9.0 Reference Manual:

- For creating/opening observations and score data — See Section 5.3.
- For changing the coding scheme, correcting scoring errors, creating more event logs in the same observation — See Section 5.4.
- For customizing the observation screen — See Section 5.5.

- For additional functions like quickly reviewing sections of video, suspending and resuming observations, playing back data, see Section 5.6.

**Recording physiological data**

With The Observer XT you can associate observational data scored manually with physiological or any other type of data acquired with a Data Acquisition (DAQ) system, for example, the EEG data of a human or driving speed data from a car. This can be done by collecting observational data on the Observer computer while the DAQ system acquires the external data and stores them on a second computer. The external data can then be imported into the Observer. Observational data and external data can be synchronized automatically, so you can analyze them as if they were a single data set.

**General procedure**

1. Connect your DAQ system to the Observer computer and its dedicated computer.

Quick Start Guide
You can also use DAQ systems that are not physically connected to the Observer computer. In such cases, you need to import the external data in The Observer and synchronize them manually with the scored events (see Section 6.2 of The Observer XT 9.0 Reference Manual).

2 In the Observer, select **Live observation** in the Project setup and select **DAQ Settings**. Click **Edit Settings** and specify the acquisition settings you require.

3 Create a new observation (see page 18).

4 Start the observation. At that moment, The Observer starts sending a synchronization signal to the DAQ system. This signal will be used by the program when you import the external data (see below). Score data as usual (see Section 5).

5 When you are done, stop the observation as usual and import the external data (from the **File** menu, select **Import** and then **External Data...**).

For more information on recording external data, see Section 5.7 and Chapter 6 of The Observer XT 9.0 Reference Manual.
5 Selecting data

Why select data? — You select data in the following cases:

- When you want to analyze events or categories in groups. This is called **Grouping**.
- When you want to **analyze some events or categories, not others**, for example behaviors showed by male subjects only. This is called **Filtering**.
- When you want to **analyze events that occurred in specific intervals**, which can be of three types:
  - **Free intervals** (from a time/event to another time/event).
  - **Nesting** (the time period when one or more state events occurred).
  - **Time bins** (regular time intervals).

The data selected are subject to all analysis functions: Visualization, Behavior analysis, Numerical modifier analysis, Lag sequential analysis and Reliability analysis.

- If you do not select data, all data in all your observations are used for analysis. The default data selection is stored in the default **Data Profile** that you can locate in the Project Explorer, under **Data Profiles**.
- You can create more Data Profiles, each one with its own selections. For example, a Data Profile specifying all data, and another considering only female subjects.

Procedure

1 From the **Analyze** menu, select **Select Data** and then **New Data Profile**. Name the data profile and click **OK**. The new Data Profile appears.

The first box, named **Start**, contains all observations and all events within them. The second box, **Results**, contains the data currently selected. Since the two boxes are connected directly, all data are currently used for analysis. Now you can insert selection boxes between the two to refine your selection.
2 Do one or more of the following:

To **group data**, click the **Grouping...** button on the **Start** box and create the groups of subjects, behaviors and modifiers you require. You can group data manually or by the values of independent variables (for observations and subjects only):

- Elements in **Summed groups** are still considered as separate units (see the figure below, on the left).
- Elements in **Merged groups** are truly merged on the timeline and counted as one (see the figure below, on the right).

![Summed and Merged Groups](image)

To **filter data**, click the button in the blue column that corresponds to the data you want to analyze. For example, if you want to filter behaviors, click the button next to **Filter Events - By Behaviors**. Specify the elements you want to analyze and click **OK**.

To **analyze free intervals**, click the button next to **Select Intervals - Free interval selection**. Specify the start and the end point of the interval to be analyzed.

To **analyze the time when specific subjects or behaviors were scored as state events**, click the button next **Select Intervals - Nest over Behaviors** or **Select Intervals - Nest over Subjects** and specify the subject/behavior that defines that interval. For example: analyze the time when the **Mother** was **outside the room**.

To **analyze data in regular time intervals**, click the **Timebins** button in the **Results** box. Specify the number or the duration of such intervals.

3 **Choosing Filter Events** or **Select Intervals** results in creating a new selection...
Selecting data

box. Click the title of that new box and drag it over the arrow that connects the two original boxes.

Example:

Figure 7. An example of data selection combining Nesting (second box from the left) and Filtering (third box from the left).

Always put green **Nest** boxes before all your **Filter** boxes, otherwise you will filter out the events before you specify the interval based on those events.

4 Run the analysis you require (see the next sections).

For more information on data selection, see Chapter 7 of The Observer XT 9.0 Reference Manual.
6 Visualizing data

Before you choose one of the options below, make sure that the Data Profile containing the data you want to visualize is highlighted in blue in the Project Explorer. If not, click the Data Profile.

Creating a chart

- A chart plots the scored events relative to time.

From the Analyze menu, select Visualize Data. Select the observation you want to visualize and click OK.

![Chart visualization of event data and video](image)

Figure 8. Visualization of event data and video.

Data are shown in the form of colored bars (horizontal for state events, vertical for point events). You can play the event sequence back together with the corresponding video.

Creating a table of the events (Episode selection)

You can create a table listing all the events or those selected in a Data Profile. From the Analyze menu, select Episode Selection, then select New Episode Selection, then New From Current Data Profile.
Data are shown in the form of a table where each row corresponds to an event. Events that are part of the same event log or interval are grouped in Episodes. Each episode is marked by its own title row (in orange).

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Play</td>
<td>Suzanne 4</td>
<td>11/22/2004 0:420</td>
<td>Type of sky</td>
<td>1.000</td>
<td>2.000</td>
<td>Play</td>
<td>2.000</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Play</td>
<td>Suzanne 4</td>
<td>11/22/2004 0:440</td>
<td>Type of sky</td>
<td>2.000</td>
<td>2.000</td>
<td>Play</td>
<td>2.000</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Play</td>
<td>Suzanne 4</td>
<td>11/22/2004 0:490</td>
<td>Type of sky</td>
<td>1.000</td>
<td>2.000</td>
<td>Play</td>
<td>2.000</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Play</td>
<td>Suzanne 4</td>
<td>11/22/2004 0:000</td>
<td>Type of sky</td>
<td>2.000</td>
<td>2.000</td>
<td>Play</td>
<td>2.000</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Play</td>
<td>Suzanne 4</td>
<td>11/22/2004 0:000</td>
<td>Type of sky</td>
<td>2.000</td>
<td>2.000</td>
<td>Play</td>
<td>2.000</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Play</td>
<td>Suzanne 4</td>
<td>11/22/2004 0:000</td>
<td>Type of sky</td>
<td>2.000</td>
<td>2.000</td>
<td>Play</td>
<td>2.000</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Play</td>
<td>Suzanne 4</td>
<td>11/22/2004 0:000</td>
<td>Type of sky</td>
<td>2.000</td>
<td>2.000</td>
<td>Play</td>
<td>2.000</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Play</td>
<td>Suzanne 4</td>
<td>11/22/2004 0:000</td>
<td>Type of sky</td>
<td>2.000</td>
<td>2.000</td>
<td>Play</td>
<td>2.000</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Play</td>
<td>Suzanne 4</td>
<td>11/22/2004 0:000</td>
<td>Type of sky</td>
<td>2.000</td>
<td>2.000</td>
<td>Play</td>
<td>2.000</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Play</td>
<td>Suzanne 4</td>
<td>11/22/2004 0:000</td>
<td>Type of sky</td>
<td>2.000</td>
<td>2.000</td>
<td>Play</td>
<td>2.000</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Play</td>
<td>Suzanne 4</td>
<td>11/22/2004 0:000</td>
<td>Type of sky</td>
<td>2.000</td>
<td>2.000</td>
<td>Play</td>
<td>2.000</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Play</td>
<td>Suzanne 4</td>
<td>11/22/2004 0:000</td>
<td>Type of sky</td>
<td>2.000</td>
<td>2.000</td>
<td>Play</td>
<td>2.000</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Play</td>
<td>Suzanne 4</td>
<td>11/22/2004 0:000</td>
<td>Type of sky</td>
<td>2.000</td>
<td>2.000</td>
<td>Play</td>
<td>2.000</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Play</td>
<td>Suzanne 4</td>
<td>11/22/2004 0:000</td>
<td>Type of sky</td>
<td>2.000</td>
<td>2.000</td>
<td>Play</td>
<td>2.000</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Play</td>
<td>Suzanne 4</td>
<td>11/22/2004 0:000</td>
<td>Type of sky</td>
<td>2.000</td>
<td>2.000</td>
<td>Play</td>
<td>2.000</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Play</td>
<td>Suzanne 4</td>
<td>11/22/2004 0:000</td>
<td>Type of sky</td>
<td>2.000</td>
<td>2.000</td>
<td>Play</td>
<td>2.000</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Play</td>
<td>Suzanne 4</td>
<td>11/22/2004 0:000</td>
<td>Type of sky</td>
<td>2.000</td>
<td>2.000</td>
<td>Play</td>
<td>2.000</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Play</td>
<td>Suzanne 4</td>
<td>11/22/2004 0:000</td>
<td>Type of sky</td>
<td>2.000</td>
<td>2.000</td>
<td>Play</td>
<td>2.000</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Play</td>
<td>Suzanne 4</td>
<td>11/22/2004 0:000</td>
<td>Type of sky</td>
<td>2.000</td>
<td>2.000</td>
<td>Play</td>
<td>2.000</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Play</td>
<td>Suzanne 4</td>
<td>11/22/2004 0:000</td>
<td>Type of sky</td>
<td>2.000</td>
<td>2.000</td>
<td>Play</td>
<td>2.000</td>
<td></td>
</tr>
</tbody>
</table>

Figure 9. Table of events in an Episode Selection. During playback of the Episode Selection, the corresponding video is highlighted in red.

You can edit the Episode Selection by adding, removing and sorting events and export it to a text file.

Making a highlight video clip

You can play back the events in the Episode Selection and create a video clip that shows those events. Create a new episode selection (see above). To generate the corresponding video clip, from the Analyze menu, select Episode Selection, then Generate Media File.... Select MainConcept MPEG-4 Video Encoder and click Generate.

For more information on Data Visualization, see Chapter 8 of The Observer XT 9.0 Reference Manual.
7 Calculating statistics

Before calculating statistics, make sure that the Data Profile containing the data you want to analyze is highlighted in blue in the Project Explorer. If not, click the Data Profile.

Behavior Analysis

With Behavior analysis you calculate for example the average duration or the total frequency of behaviors.

1. From the Analyze menu, select Behavior Analysis, then New.

2. In the Analysis Settings window, in the Layout tab, select the categories you want to have in the results table. Drag a category to a different box. For example, drag Observations to On Sheets to have the results of different observations displayed on separate sheets. Choose the remaining options and click OK.

3. A table with values appears.

<table>
<thead>
<tr>
<th>Selection Result 1</th>
<th>Behaviors</th>
<th>Total number</th>
<th>Total Duration</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Turn right</td>
<td>4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Turn left</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Gaze at left mirror</td>
<td>3</td>
<td>1.520</td>
<td>0.507</td>
</tr>
<tr>
<td></td>
<td>Gaze at right mirror</td>
<td>3</td>
<td>2.440</td>
<td>0.813</td>
</tr>
<tr>
<td></td>
<td>Gaze at rearview mirror</td>
<td>23</td>
<td>15.840</td>
<td>0.889</td>
</tr>
<tr>
<td></td>
<td>Gaze at road</td>
<td>95</td>
<td>394.785</td>
<td>3.208</td>
</tr>
<tr>
<td></td>
<td>Gaze at dashboard</td>
<td>3</td>
<td>2.200</td>
<td>0.733</td>
</tr>
<tr>
<td></td>
<td>Gaze at other object</td>
<td>96</td>
<td>65.896</td>
<td>0.996</td>
</tr>
<tr>
<td></td>
<td>Gaze at crossing car</td>
<td>3</td>
<td>2.870</td>
<td>0.967</td>
</tr>
<tr>
<td></td>
<td>Gaze at traffic light</td>
<td>9</td>
<td>2.990</td>
<td>0.584</td>
</tr>
<tr>
<td></td>
<td>Gaze at bike</td>
<td>2</td>
<td>4.430</td>
<td>2.240</td>
</tr>
</tbody>
</table>

Figure 10. Behavior Analysis results table.

Numerical Modifier Analysis

With Numerical modifier analysis you can calculate statistics of the numbers scored as Numerical modifiers (see page 17). For example, the average value of the modifier Aggression level.

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Calculating statistics

1. From the Analyze menu, select Numerical Analysis then New.

2. Under Layout, select the categories you want to have in the results table. Drag a category to a different box for example drag Subjects to On Columns to have the results of different subjects displayed on separate columns. Choose the remaining options and click OK.

3. The results table with values appears.

Tips

- **To re-arrange the layout** of the table, click the Layout button on the results window.
- **To save the results** within the project, click the Archive Results button on the results window.
- **To export the results**, click the Export button on the results window.
- You can also analyze the numerical modifiers as nominal modifiers in the behavior analysis, for example to calculate how often ‘2’ was scored.

For more information on Calculating Statistics, see Chapter 9 of The Observer XT 9.0 Reference Manual. For an example of numerical modifiers, open the sample project 'Usability testing of cars XT80' available on the Sample Projects DVD.

Hypothesis testing

The Observer XT does not make any statistical test like t-test or ANOVA. To analyze data in such a way, first export your observational data or results (see page 34) and then import them into your statistical package.
8 Lag sequential analysis

With Lag sequential analysis you calculate frequencies of transitions between pairs of events within a certain lag, in a time series. It helps you answer questions like:

- In the interaction between a Boss and an Employee, how often was the event Lean backward followed by Looking away from other person or Looking at other person?
- How likely was the event Boss Talking to followed by Employee Looking away?

The lag can be either a state lag or a time lag:

- **State lag** — To calculate transitions between events that are separated by a fixed number of events. For example, the transitions from an event to the next (state lag = +1), or the second next (state lag = +2) etc. Lag order can be from -9 to +9. The time interval between events does not influence the calculations.

- **Time lag** — To calculate transitions between events that are separated by less than a specific time (time lag). For example, the transitions from an event and those occurring in the next 10 seconds. The order in which events occur within the time lag does not influence the calculations.

Before running an analysis, make sure that the Data Profile containing the data you want to analyze is highlighted in blue in the project Explorer. If not, click the Data Profile.

1. From the Analyze menu, select Lag Sequential Analysis, then New.
2. Under Analysis Settings, select whether you want to perform state lag or time lag analysis, and choose the remaining options. Under Layout, specify how you want the table to look like (for example, to collapse the data across observations). Next, click OK.
3. A table appears on your screen. Each cell contains the frequency (or probability, depending on what you have chosen in the Analysis Settings) of the transitions from the event of the corresponding row and the event of the corresponding column.

For more information on Lag Sequential Analysis, see Chapter 10 of The Observer XT 9.0 Reference Manual.
Reliability analysis

When comparing two observations (or groups of), reliability determines how consistently the behavior was measured. You can check your own consistency over time, or that between researchers.

In Reliability analysis, the observations are paired and events are compared, producing a Comparison list.

The Reliability Result calculates the following statistics:

- Number of agreements and disagreements.
- Proportion of agreement.
- Cohen's Kappa (and its statistical significance).
- Pearson's Rho (and its statistical significance).

Before running an analysis, make sure that the Data Profile containing the data you want to analyze is highlighted in blue in the Project Explorer. If not, click the Data Profile.

1. From the Analyze menu, select **Reliability Analysis**, then **New**.

2. In the **Settings** tab, choose the observations you want to compare from the list. If you want to compare more than two observations, create a new pair by clicking **Add pair**. Specify the **Tolerance window** (the maximum acceptable

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Section 9

discrepancy between timing of events for these to be considered an agreement). Choose the remaining options and click OK.

3 A table appears on your screen. Click the buttons Statistics, Confusion Matrix, Comparison List to view the results.

<table>
<thead>
<tr>
<th>Result</th>
<th>Erin 3 years old / Default Criterion 1</th>
<th>Erin 3 years old, edited / Default Criterion 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>0.000 Observation start</td>
<td>0.000 Observation start</td>
</tr>
<tr>
<td>-</td>
<td>0.000 Synchronization point</td>
<td>0.000 Synchronization point</td>
</tr>
<tr>
<td>✓ Agreement</td>
<td>0.000 &lt;Unspecified Verbal behavior root&gt;</td>
<td>0.060 &lt;Unspecified Verbal behavior root&gt;</td>
</tr>
<tr>
<td>✓ Agreement</td>
<td>0.000 Interaction undetermined</td>
<td>0.000 Interaction undetermined</td>
</tr>
<tr>
<td>✓ Agreement</td>
<td>0.000 Gaze elsewhere</td>
<td>0.000 Gaze elsewhere</td>
</tr>
<tr>
<td>✓ Agreement</td>
<td>1.920 Gaze object</td>
<td>1.920 Gaze object</td>
</tr>
<tr>
<td>✓ Agreement</td>
<td>3.000 No interaction</td>
<td>3.000 No interaction</td>
</tr>
<tr>
<td>✓ Agreement</td>
<td>5.680 Gaze adult</td>
<td>5.680 Gaze adult</td>
</tr>
<tr>
<td>✗ Disagreement</td>
<td>7.960 Gaze object</td>
<td>7.960 Gaze elsewhere</td>
</tr>
<tr>
<td>✓ Agreement</td>
<td>9.760 Talk</td>
<td>9.760 Talk</td>
</tr>
<tr>
<td>✓ Agreement</td>
<td>31.160 Gaze elsewhere</td>
<td>31.160 Gaze elsewhere</td>
</tr>
<tr>
<td>✗ Disagreement</td>
<td>35.600 Gaze object</td>
<td>35.600 Gaze adult</td>
</tr>
<tr>
<td>✓ Agreement</td>
<td>37.880 Talk</td>
<td>37.880 Talk</td>
</tr>
<tr>
<td>✓ Agreement</td>
<td>46.240 Talk</td>
<td>46.240 Talk</td>
</tr>
<tr>
<td>✓ Agreement</td>
<td>54.460 Talk</td>
<td>54.460 Talk</td>
</tr>
</tbody>
</table>

Figure 12. Reliability analysis result - Comparison List. The example was taken from the sample project Kids at play. A copy of the observation Erin 3 years old has been edited to make it slightly different and saved as Erin 3 years old, edited. In Erin 3 years old, the observer scored Gaze object at 7.96 s and Gaze object at 35.6 s, while in Erin 3 years old, edited this was changed to Gaze elsewhere and Gaze adult, respectively. This results in two disagreements (see first column).

For more information on Reliability Analysis, see Chapter 11 of The Observer XT 9.0 Reference Manual.
10 Managing data and results

See the following sections to create copies of your projects, import data and export data, analysis results and episode selections to your favorite spreadsheet or statistics package.

Backing up a project

You can copy an entire project by making a backup file. A backup file is like a ZIP file containing your project files, including data and analysis results. It proves very handy when you want to move your data to another computer or send it via email to a collaborator.

We advise you to make a backup of your projects at least once a day. Copy the backup to a secure medium like a network drive.

1. From the File menu select Save As.
2. From the Save in list choose the folder in which you want to save the copy, then type a name in the File name field and choose The Observer XT Project Backup (*.vpb) from the Save as type list. Next, click Save.

To re-open the project from a Backup file, from the File menu select Open Project, and choose The Observer XT Project Backup (*.vpb) from the Files of type list. Click the Change directory button to specify where to save the project.

Project backups do not contain the video files used to score the data.

Importing and exporting projects

You can also import/export projects of previous Observer versions (4 / 5 / XT 6.x / XT 7.x / XT 8.0).

To import and export observations to/from projects, see the next page.

For more information, see Section 12.1 of The Observer XT 9.0 Reference Manual.
Using projects with multiple coding stations

You can set an Observer XT project in such a way that data can be shared with multiple computers working as coding stations.

You define a project with a coding scheme on the main computer. Each coding station receives a copy of this project, where one can record events but not change the coding scheme (read-only project). You can then import the data from the coding stations to perform analysis.

For more information, see Creating a multiple coding station configuration in Section 12.1 in The Observer XT 9.0 Reference Manual.

Exporting observational data

To export your data (including independent variables and optionally media files and physiological data):

1. From the File menu select Export Observational Data. Choose the observations you want to export and click Next.

2. Choose a name for your export file, select the format (*.odx), specify whether you want to include media files and external (physiological) data together with the observational data, and click Export.

   To export data of a single observation, right-click the observation in the Project Explorer and select Export. You can also export event log data as ASCII (*.txt) files.

For more information, see Section 12.2 of The Observer XT 9.0 Reference Manual.

Importing observational data

You can import data files of previous Observer versions (3/4/5) or any other behavioral data in ASCII format.

1. From the File menu select Import, then Observational data.

2. Click Custom Import Profiles and then Create New if you want to import data of format other than Observer 3/4/5. If the data to import are stored in an ODX file, make sure ODX File (*.odx) is selected from the Files of type list.

For more information, see Section 12.3 of The Observer XT 9.0 Reference Manual.
Exporting analysis results to a file

1. Make sure that the analysis result you want to export is open on your screen. If necessary, adjust the layout of the result table to suit the import requirements of your statistical package (see page 31).

2. From the Analyze menu, select Export Analysis Results, or click the Export button in the results window.

3. Choose a name for your file, specify the format (XML or text) and click Export.

Copying and pasting to other programs

To quickly export an analysis result to other programs, such as Excel, select the whole table (from the Edit menu select Select All or part of it) and then from the Edit menu select Copy. In the other program, from the Edit menu select Paste.

For more information, see Section 12.5 of The Observer XT 9.0 Reference Manual.

Exporting episode selections

To export all your episode selections:

1. From the Analyze menu, select Episode Selection and then Export.

2. Enter a base filename for your files and click Export. Your files are saved in ASCII format.

   To export a single episode selection, right-click that episode selection in the Project Explorer and select Export Episode Selection.

For more information, see Section 12.6 of The Observer XT 9.0 Reference Manual.

Exporting physiological data

If your observation includes physiological data, you can export them together with your behavioral data, using an episode selection.

1. Make a data profile that filters the observation (see Section 6, page 26) and then an episode selection that includes both the behavioral and physiological data (see Section 7, page 28).
Section 10

2 Export the episode selection: From the Analyze menu, select Episode Selection and then Export...

For more information, see Section 12.6 of The Observer XT 9.0 Reference Manual.