1. Get Started

Aiôn is a tool designed to help scientists with behavioral studies. This tool allows you to turn what the subject does into lengths and numbers. It is then possible to export and use this data.

Aiôn is a simple tool with only a few features:

- Track keeping of a subject into a closed space
- Definition of points of interest (called positions) at which the subject can be
- Definition of the temporal structure of the experiment for a given subject (e.g. 2 sequences of 5 minutes each)
- Definition of a list of subject involved in the study (one subject at a time, the order is preset)
- Measurement of the number of passages and the time spent on each point of interest
- Export this data into a spreadsheet (comma-separated values)
- Data cutting according to a new temporal structure after the experiment

1.1. How to use Aiôn

In order to run this software, you need Java JRE 7 (same as 1.7) or higher. You can download it here. If you have a doubts about whether Java is installed or not, you can proceed to the next step and come back to this instruction in case of failure.

In case you don't already have a copy of Aiôn, you can find one here.

That done, you should be able to run it by simply double-clicking on the Aiôn file. You should now see the Aiôn window.

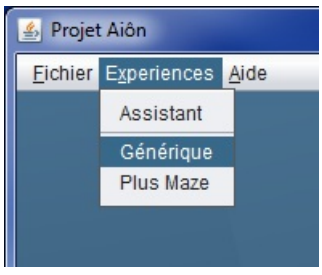
Here is the **workflow** of this tool :

1. Create experiment data by defining subjects, temporal and physical structures
2. Run the experiment. You can do it several times by creating multiple datasets.
3. Export the data directly.
4. Regenerate the data by subdividing temporal structures. Repeatable by creating multiple subdivisions.
5. Export the regenerated data.

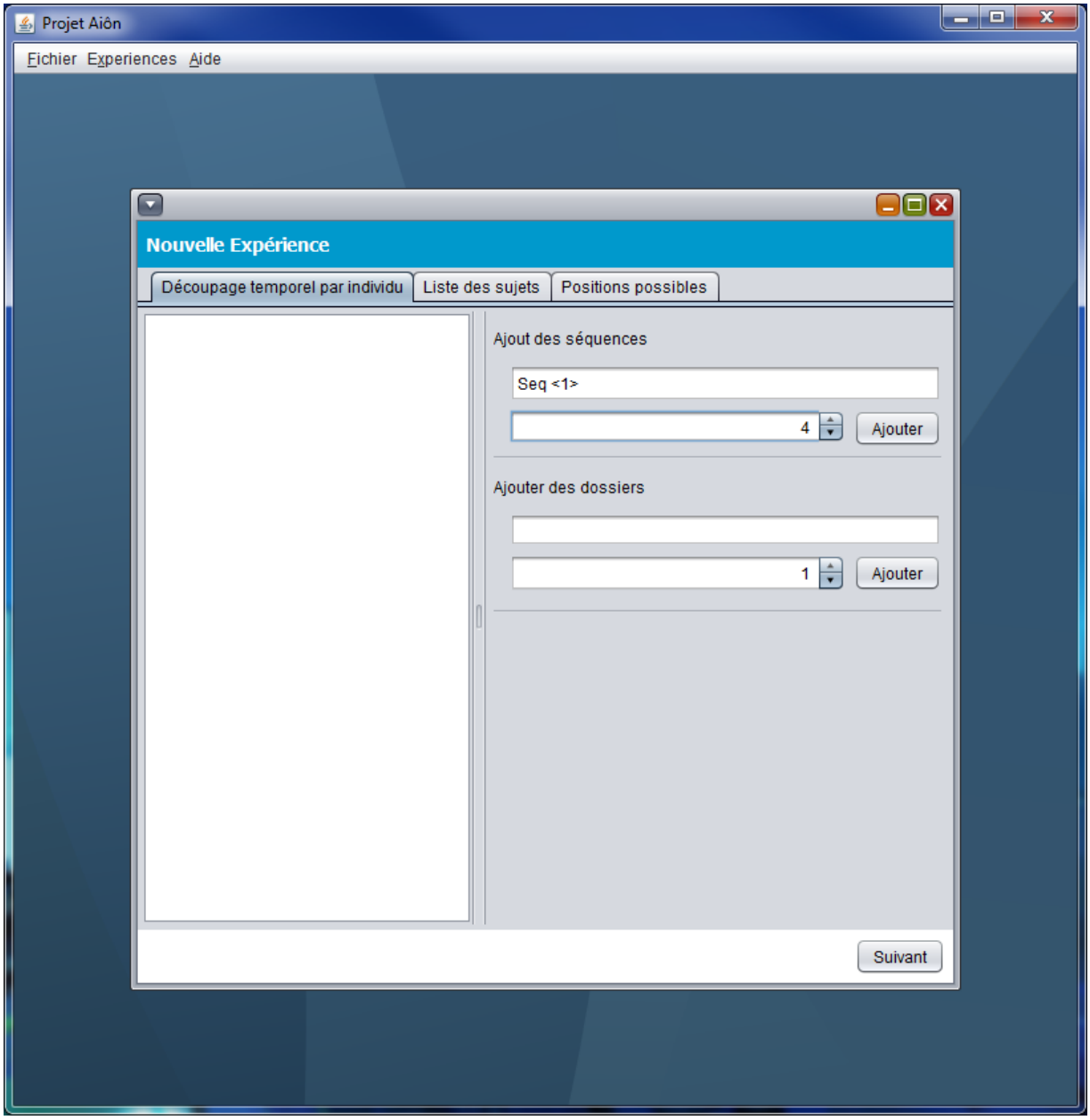
Note: Steps 3. and 5. are not handled by the tool itself, you have to find your file in the data folder. Refer to the "Folder Structure" section of this document for further informations.

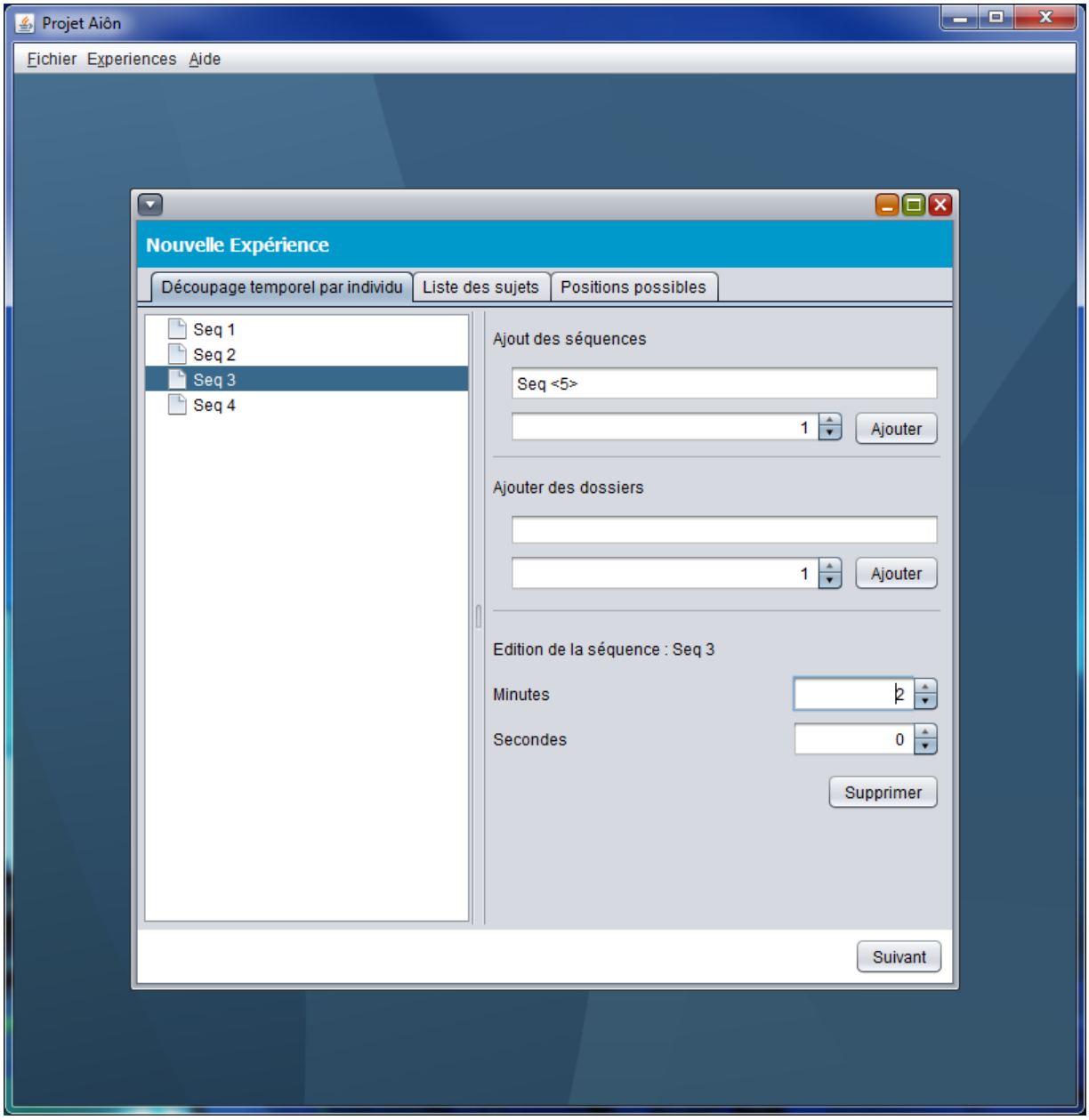
1.1.1. Initial experiment

First thing, create a new experiment by clicking `Experiments > Generic` and give it a name. The first field is the name of the global configuration (subjects + sequences + positions) and the second field is the name of the DataSet.

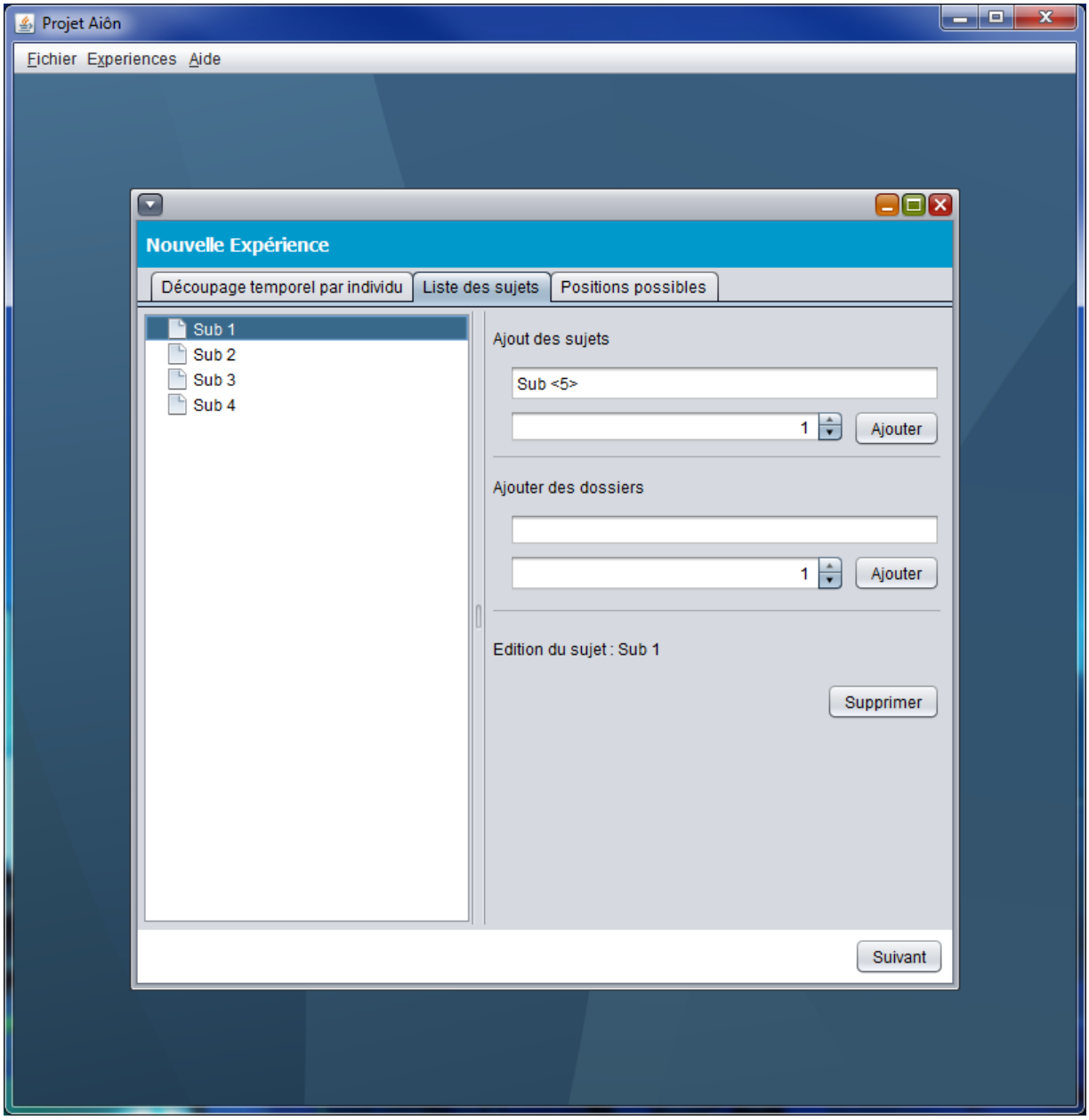


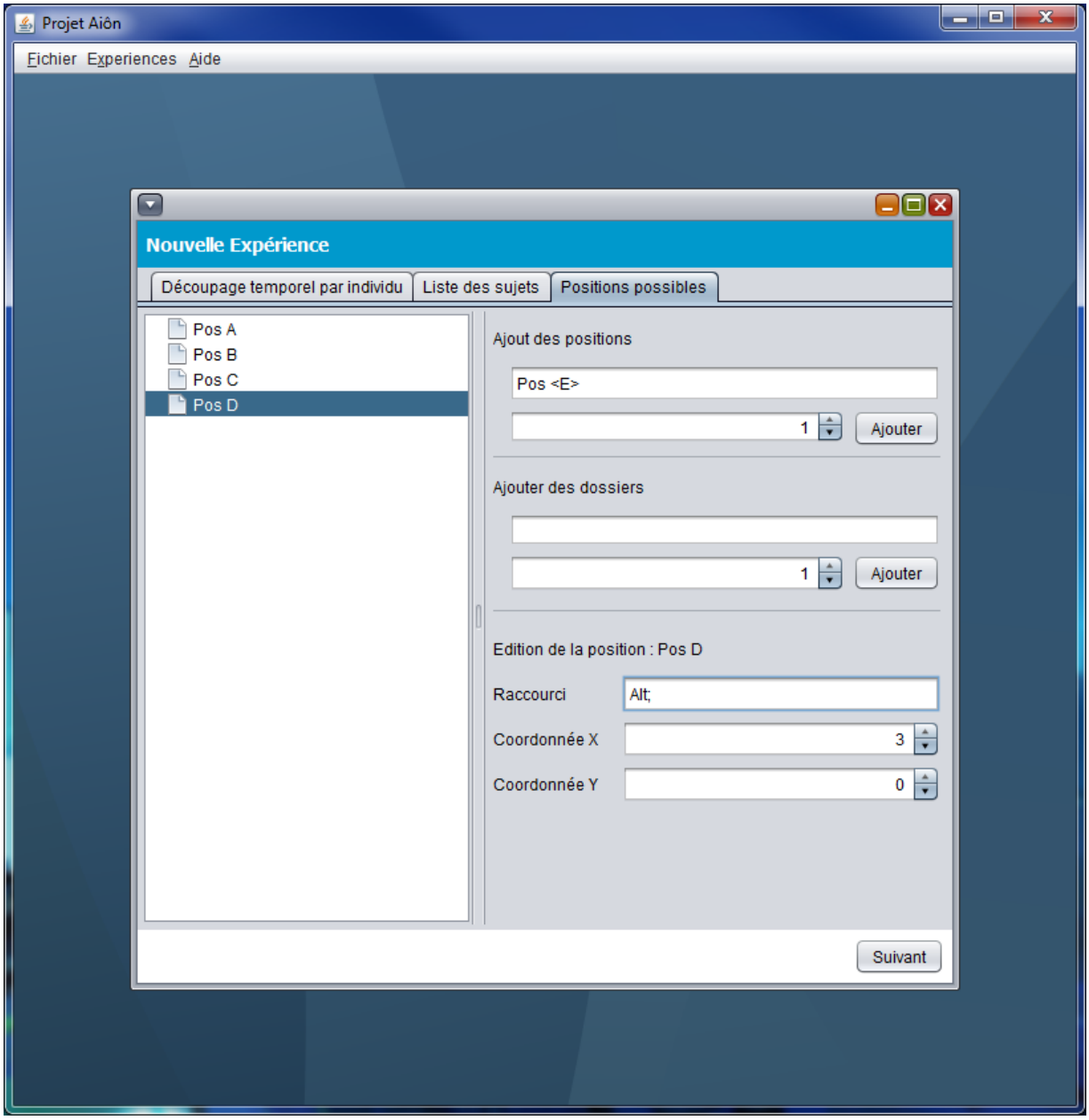
After clicking `Next`, you have to configure the experiment. You'll be able to create sequences with the panel on the right. You can also create folders for organisation purposes. In this example we created 4 sequences of 2 minutes each, meaning the subject will have to enter the "experiment space" 4 times and to stay for 2 minutes each time.



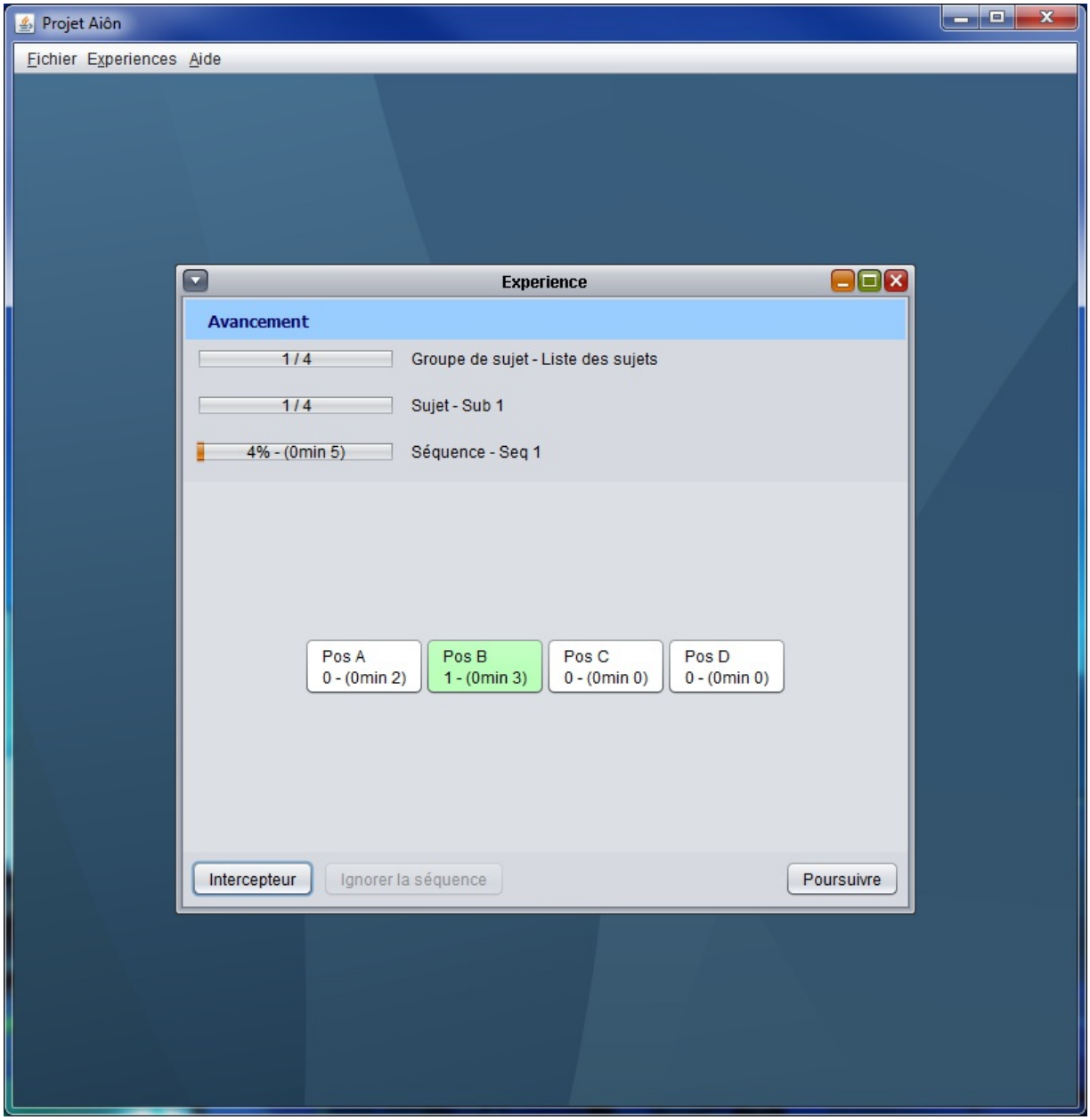


Subjects and possible locations in the space (positions) must be defined as for sequences. I recommend setting a shortcut for each position to make it easy to switch between them.


Projet Aiôn
Fichier Experiences Aide
Nouvelle Expérience
Découpage temporel par individu
Liste des sujets
Positions possibles
Sub 1
Sub 2
Sub 3
Sub 4
Ajout des sujets
Sub <5>
1
Ajouter
Ajouter des dossiers
1
Ajouter
Edition du sujet : Sub 1
Supprimer
Suivant

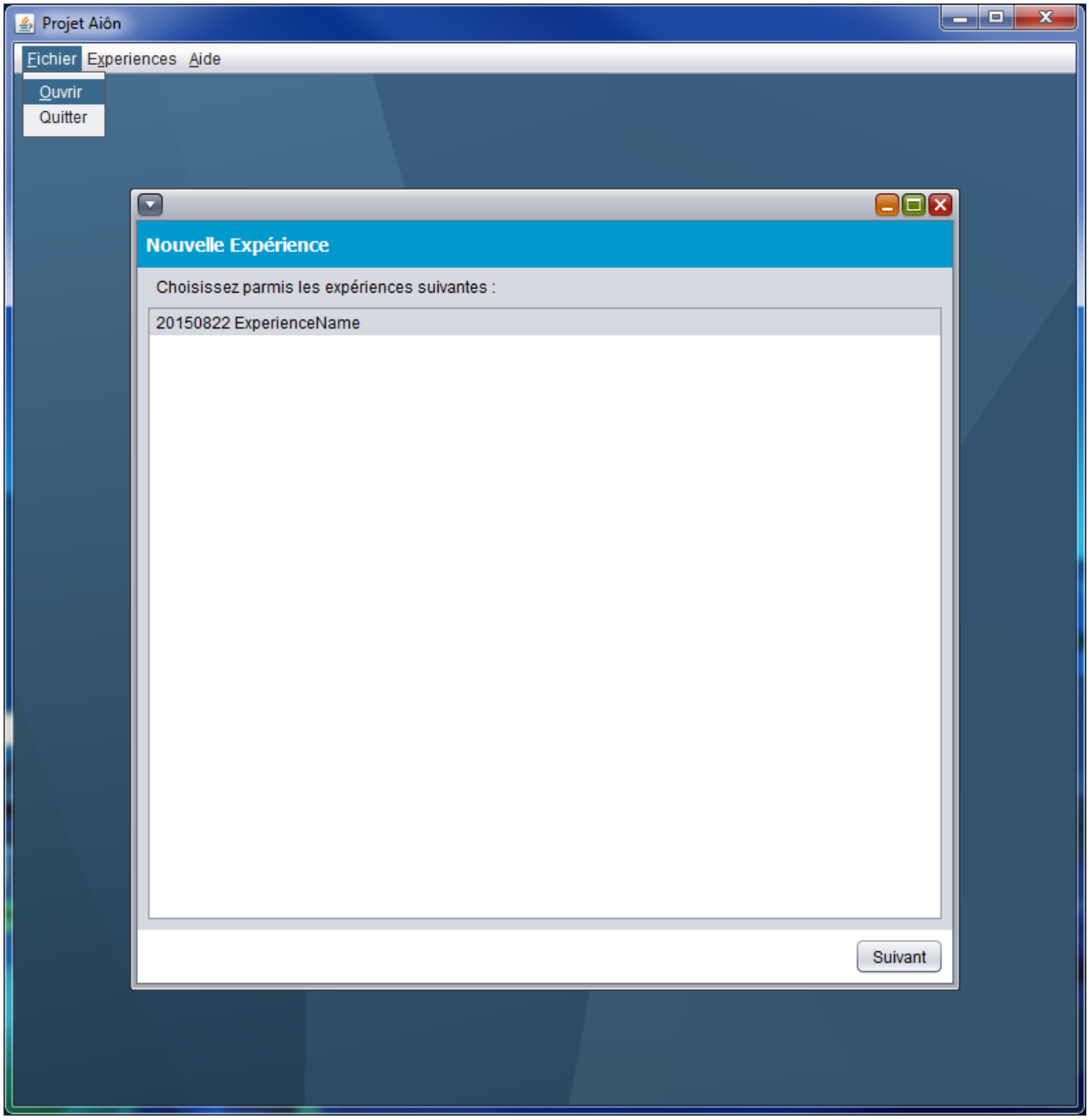


Your experiment is ready. You can process your dataset. If needed, you can close this sub-window and resume later.

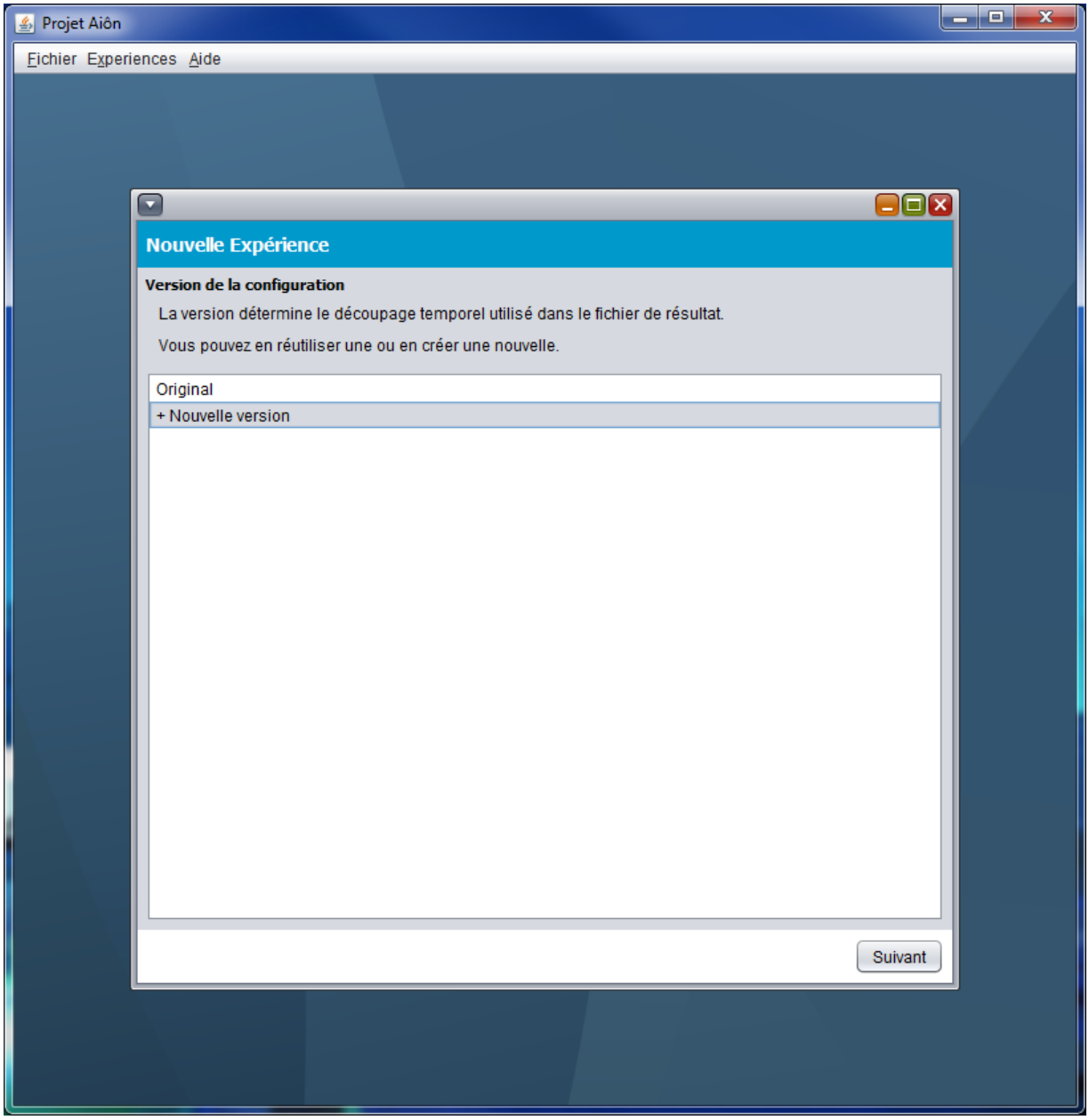


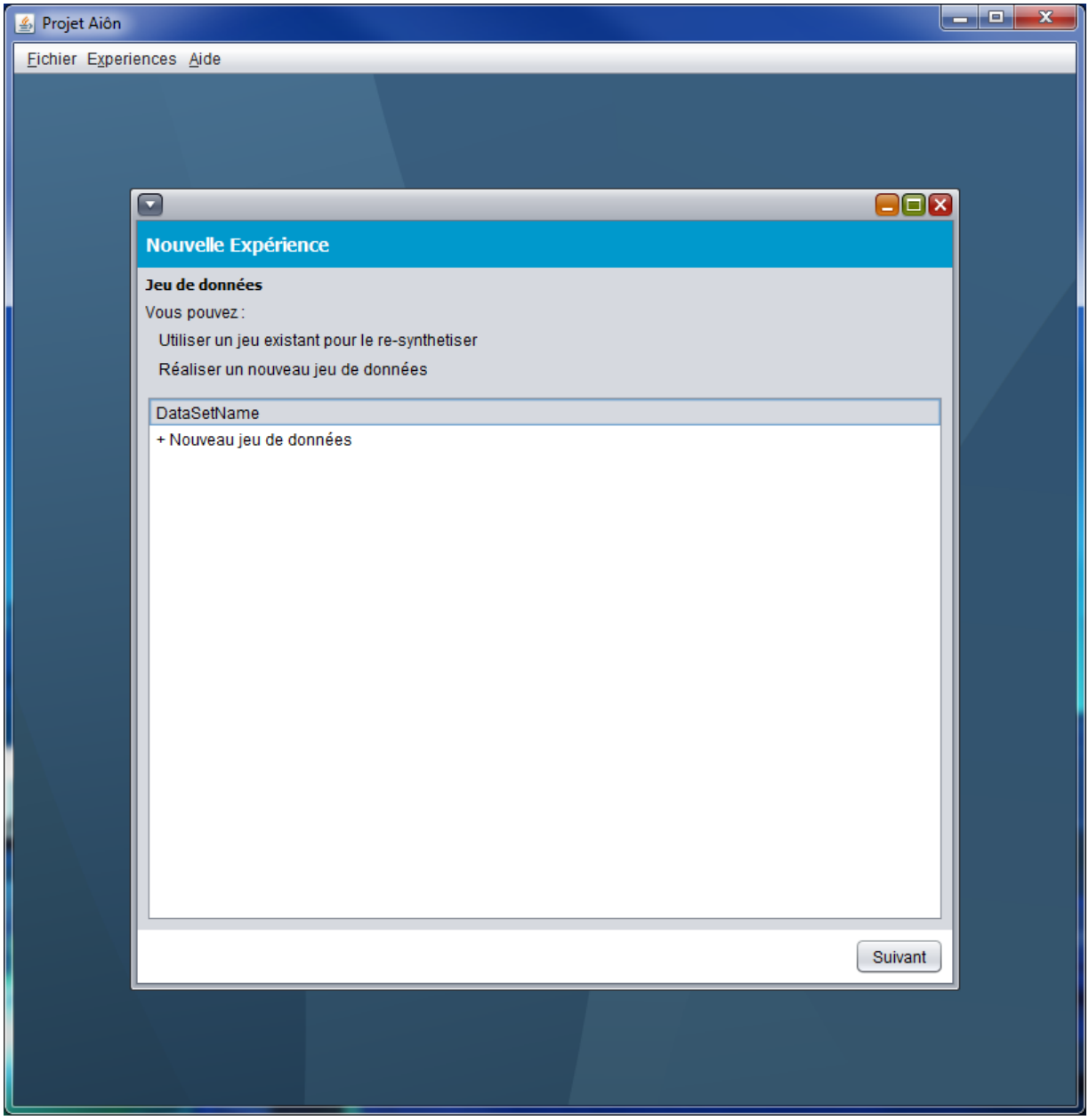
1.1.2. New subdivision and new dataset

Your experiment had already been set up, it can then be reused by clicking on `File > Open`. After selecting it, click `Next`.

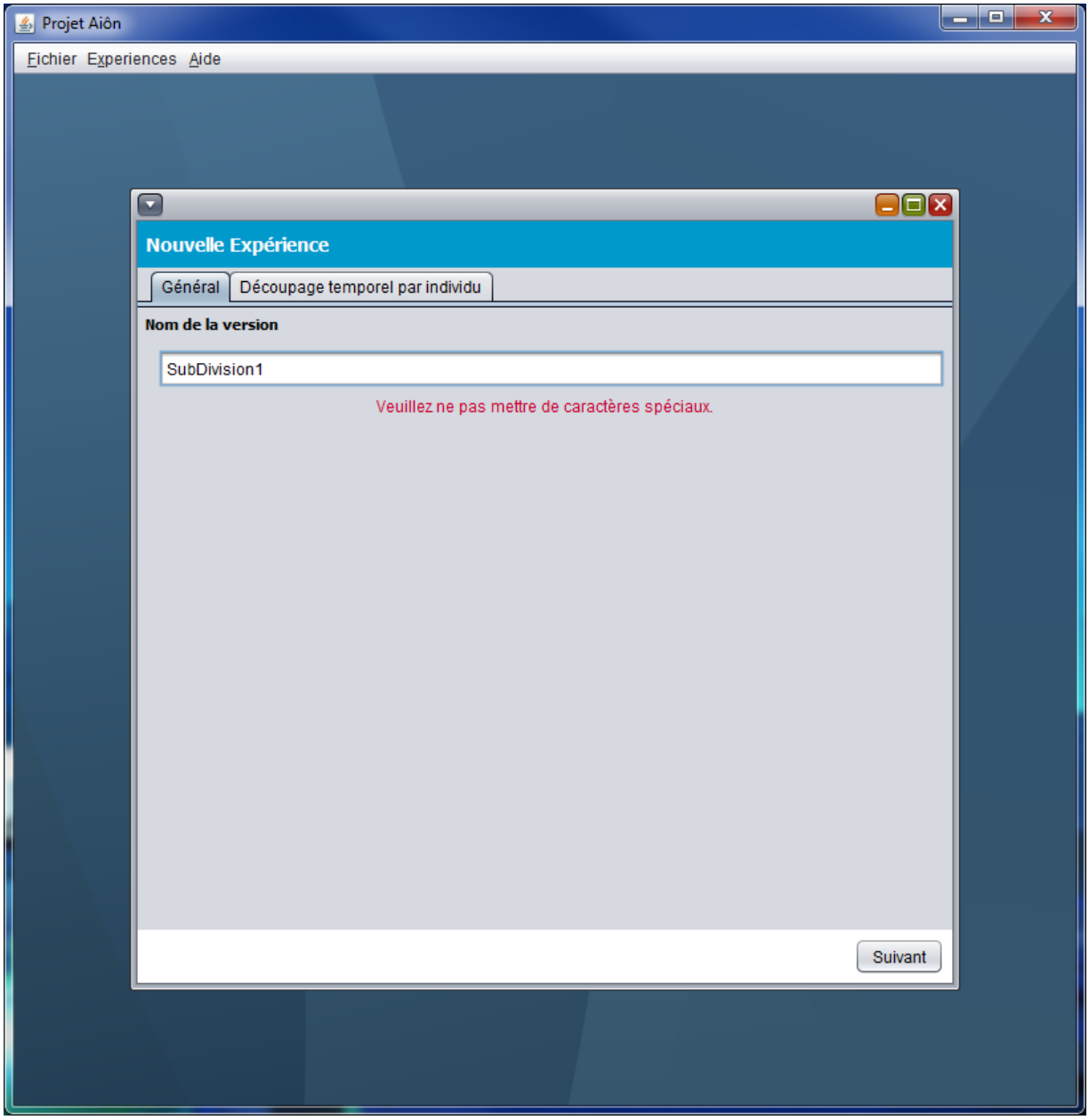


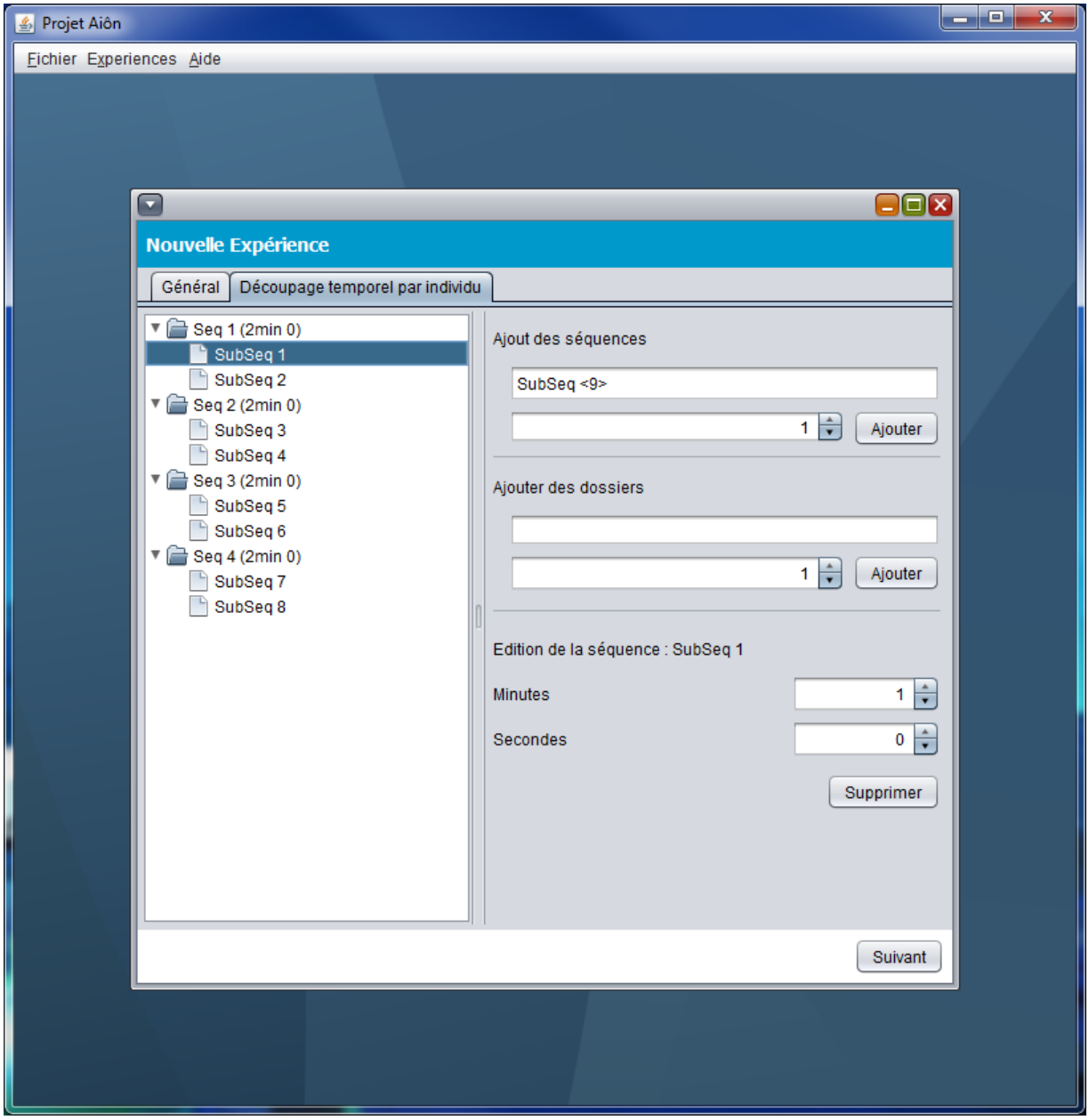
You have now to chose the configuration version. "Original" is the default configuration, the one created during the last step (Initial experiment). You can subdivide data by creating a new configuration. You also can use "Original" to create a new dataset or regenerate an existing one (if the *.csv has been lost).


Projet Aiôn
Fichier Experiences Aide
Nouvelle Expérience
Version de la configuration
La version détermine le découpage temporel utilisé dans le fichier de résultat.
Vous pouvez en réutiliser une ou en créer une nouvelle.
Original
+ Nouvelle version
Suivant

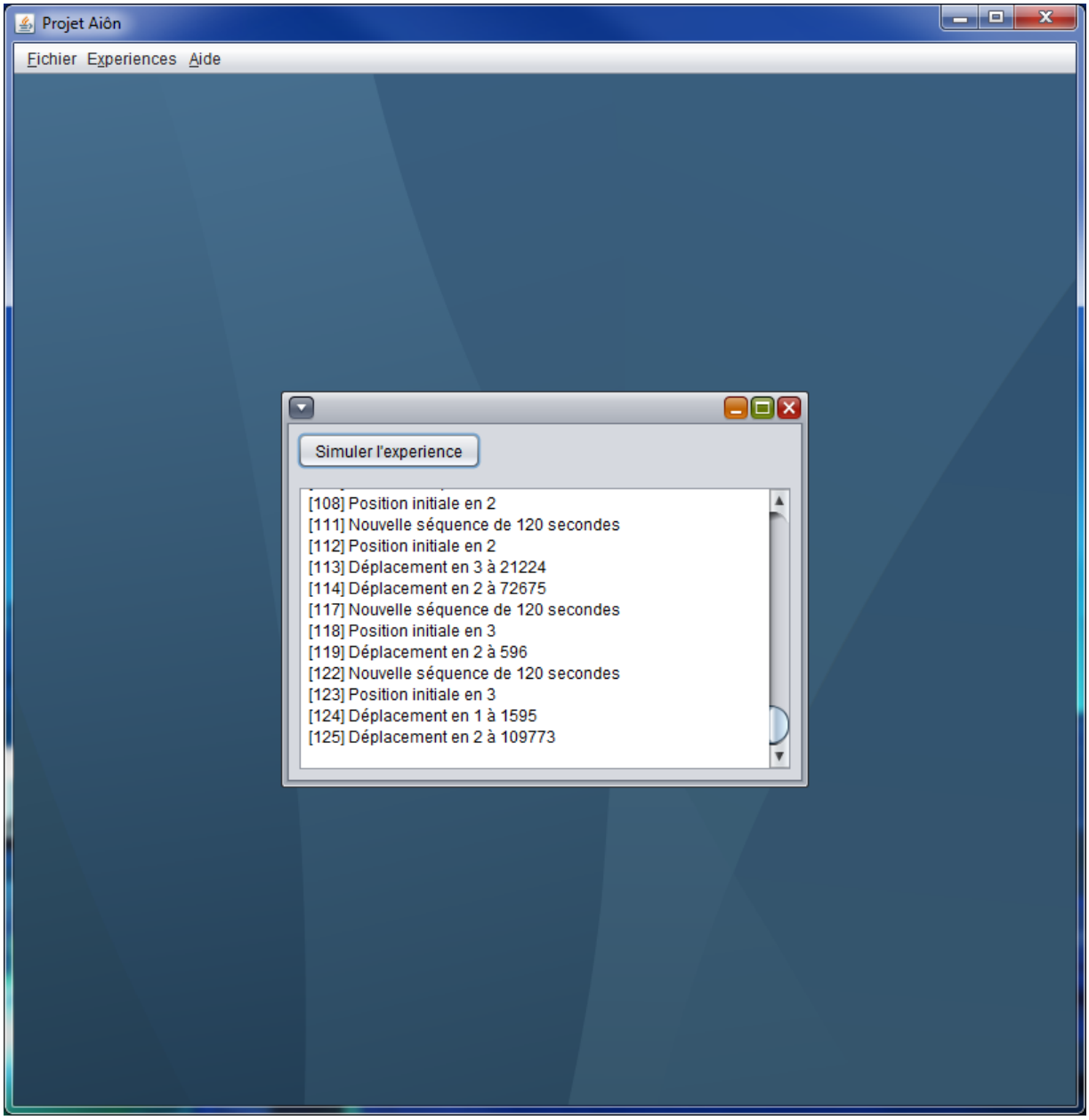


We will now explain the subdivision process. Each existing sequence is replaced by a folder. You have to fill it with sequences for an amount of time equal to the original sequence lenght. The next step will take care of regenerating the dataset according to the new division.


Projet Aiôn
Fichier Experiences Aide
Nouvelle Expérience
Général
Découpage temporel par individu
Nom de la version
SubDivision1
Veuillez ne pas mettre de caractères spéciaux.
Suivant



When the configuration is ready, hit `Next > Simulate` and let the magic happen.



1.2. Folder structure

This is Aiôn's folder structure, located near the executable `Aion.jar`. It's important to learn this because you have to browse through these directories to find your data.

```
Data/
  20150706 <ExperimentName>/
    <DatasetName>/
      Original.aion            <- Main file
      Original.csv             <- Final data
      <SubdivideName>.csv      <- Final data

    Original.ser               <- Experiment configuration
    <SubdivideName>.ser        <- Subdivide configuration

Log : contains files with details on errors when they occur
```

Here are some explanations. Aiôn uses three types of files.

- `Original.aion` is written in real time during the experiment. It is humanly readable, Raw text and very

important: it's used to regenerate the data with a different temporal configuration. If for any reason Aiôn fails to end the file, it is possible to modify this file to complete it or merge it with another partial dataset (it works better with the same configuration). Aiôn is really flexible and imposes on purpose few security constraints. This means you can crash it easily by modifying files in an inconsistent state. In return, it won't fail if some things are missing.

- `*.csv` files are final data, ready for Excel/Calc import. If a CSV file is lost, it can be regenerated from the `Original.aion` file.
- `*.ser` files contain temporal structures, positions and subjects. If the file is lost, you can recreate the experiment with the Aiôn wizard and reuse the resulting file, since there is no fail-safe.

  More informations on modifying files when attempting recovery here.

1.3. Chronos, the previous version

Aiôn is the second version of the project. Chronos, the first version, was created hastily in 2007 in order to replace a broken tool. It could only handle an experiment named "Plus Maze" with a very specific temporal configuration (5 minutes for each subject). There is no need to use it since Aiôn handles this experiment in a much safer manner, but it is still possible to find the legacy version here.

1.4. Contributors

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