

# SU CLOCK

## Tracking Time in Sketchup

VERSION 1.2 – 03 JUN 2011

### 1. Overview

**SUClock** tracks the *effective* time spent in Sketchup. The concept of *effective* (or *active*) time is based on:

- **User activity**, essentially exercising the SU tools and interactive Ruby scripts
- **Idle time** (or *think time*): if no activity has been recorded during a period longer than the defined idle time (5 minutes by default), then no time is counted. So:
  - If the last Tool activity is done at 10am, and then the next one at 10:09am, then the 9 minutes time difference (>5) will NOT be counted in the Tracked time.
  - If you are inactive during 3 minutes only (< 5), then the tracked time will be incremented by 3 minutes when you perform again an action.

**Activity in Sketchup corresponds to using any standard tools** (including zooming with the mouse wheel) **or interactive plugins** (i.e. those where you graphically interact with the model, like FredoScale, ShapeBender, ExtrudeByEdge, ...). If you only play with Sketchup dialog boxes (say shadow, layers, preferences, ...), this will not be seen as an activity (this is due to limitations in the Ruby API).

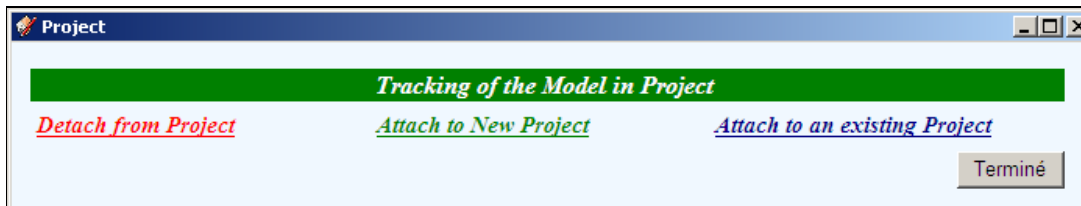
**Time is tracked by Project.** A project can include **several models** (including the subsequent versions of each model). This reflects more real-life situation where modeling projects may involve working on several model files.

**SUClock also maintains a few statistics about SU usage:**

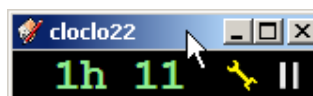
- by Day / Month,
- by Tool,
- by Model.

**Tracking information is maintained in an external file**, in the form of **<project>.suclock** file, which is saved on your local drive. Each model (i.e. .skp file) associated to the tracking project is stamped with the path to this file (absolute and relative to the model).

At any time, you can detach a model from a tracking project, or associate it to a new or to another existing tracking project.



For convenience, a small clock window can be displayed on the Sketchup desktop to indicate the current effective time of a tracking project, in minutes.



From the clock (yellow wrench icon), or via the menu *Configure Tracking Project*, you can access the settings and the statistics

**Project aclock 22**

**Project Parameters**

Project Name: **aclock 22**  
Active time spent: **43:14:38**  
...in Current Session: 0:00:03  
Idle Time:  minutes  
Target Time (hh:mm):  Alarm at  %  
Directory: **D:/Documents/Doc/AA\_SKU/Ruby/All Models**  
Temporary files in: **c:/temp**  
Created on: **03-Jun-11 07:11**

**Tracking of the Model in Project**

[Detach from Project](#)   [Attach to New Project](#)   [Attach to an existing Project](#)  
[Merge with another project](#)   [Reset project](#)  
[Recents Projects](#)   [Purge](#)  
[AFSPLINE?](#)

**Statistics**

Statistics can be printed or exported to Excel as a CSV file

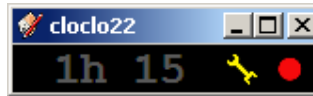
**SU Tools**

**aclock 22**  
*SU Tools*

Time tracked from 12-Apr-11 08:48 to 03-Jun-11 05:32

SU and Ruby Tools	%%	Time	%
<b>Selection Mode</b>		<b>1:21:03</b>	<b>61.5%</b>
<b>Sketchup Tools</b>		<b>0:30:31</b>	<b>23.2%</b>
CameraOrbit	37.2%	0:11:22	8.6%
Measure	26.9%	0:08:12	6.2%
Line	9.3%	0:02:50	2.2%
Offset	6.5%	0:01:59	1.5%
Paint	5.5%	0:01:41	1.3%
Move	5.2%	0:01:35	1.2%
PushPull	2.6%	0:00:47	0.6%
Scale	2.0%	0:00:35	0.5%
Polygon	1.9%	0:00:35	0.5%
Circle	1.2%	0:00:22	0.3%
Rectangle	1.0%	0:00:18	0.2%
Freehand	0.3%	0:00:05	0.1%
Erase	0.2%	0:00:04	0.1%
<b>Ruby Scripts</b>		<b>0:30:16</b>	<b>15.40%</b>

Finally, you can also suspend temporarily the time tracking for a model (Pause button)



## 2. Installation

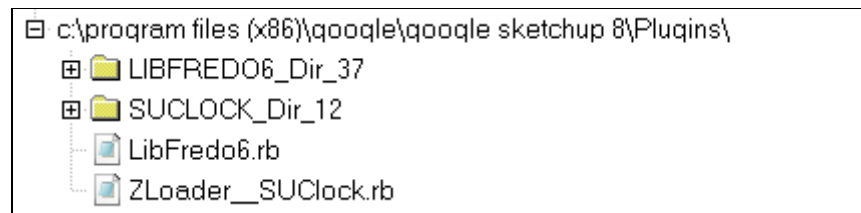
- **Sketchup versions:** **6+** (Free and Pro).
- The plugin requires **LibFredo6 v3.7 or higher**
- **Unzip**<sup>1</sup> the file you downloaded (*SUClock\_xx.zip* in principle) into the Sketchup Plugins folder, answering **YES** to all prompts for file overwriting, in order to make sure you reconstruct the folder hierarchy.

This operation should do the following:

- **Copy one script file** *ZLoader\_\_SUClock.rb* to the Sketchup Plugins folder:
- **Create a sub-folder** *SUCLOCK\_Dir\_xx*, containing the script files, the icons and language files, as well as the documentation in PDF format.

**NEVER change the name of files or move them from their folder.**

The footprint should be (Windows environment):



**On Mac**, the right directory for unzipping is:

*Macintosh HD/Library/Application Support/Google SketchUp 8/SketchUp/plugins*

- **Language:** Initially *English* and *French*<sup>2</sup>
- **Menus:** by default, installed in *Tools > Fredo6 Collection > SUClock*
- **Icon toolbar:** by Default *'Fredo6 Tools'*<sup>3</sup>. One icons is available:
- **Default Parameters:** Plugin configuration and specific parameters, via a dialog box.



**Note:** if you plan to use SUClock to track time with models created in different Sketchup versions, make sure that you install the script for each Sketchup version and keep them at the same release level.

<sup>1</sup> In Winzip, make sure you do first a **Select All**, and then **Extract** all files to the Plugins folder, answering **YES** to all prompts for file overwriting.

<sup>2</sup> Kind contributors can generate the translation in other languages via the menu *'Translation'* and *publish the text file (extension .lang) on Sketchucation forum*.

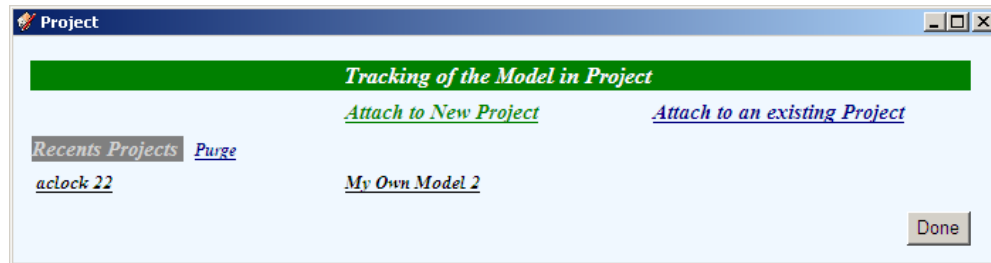
<sup>3</sup> In the future I will attach other standalone plugins to this toolbar "Fredo6 Tools"

### 3. Managing Tracking Projects

Tracking information is managed by Project, which may include one or several models. The project tracking file (extension *.suclock*) is therefore an autonomous entity to which you can freely attach SU models (and detach them).

#### 1) Attaching a Model to a Tracking Project for the first time

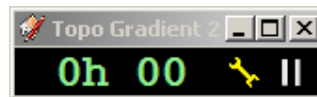
- a) Click on the SUClock icon (or select menu *Configure Tracking project*).
- b) A dialog box will appear.



You can:

- **Create a new Project file.** You will be asked for the project name and directory path. By default, it has the same name as the model
- **Or attach the model to an existing Project**, either by selecting a *.suclock* path or by selecting a recent project if any.

When done, you will see the Clock window shown on the SU desktop.



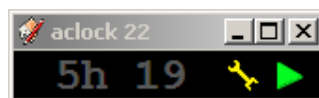
**Note:** it is advised to *save the model* to have the tracking really taken into account. This is because the tracking file path is written as an attribute of the model.

#### 2) About the Visual Clock

The effective time is tracked whether the Clock is displayed or not. You can therefore freely close it. To display it again, just click on the SUClock toolbar icon.

The Clock is a small dialog box which you can move around your desktop (even outside of the SU window). In principle it remembers its position across sessions (even on Mac).

- **The time displayed** is the effective time of the Tracking Project, not the time you spend in the current model.
- **The Wrench icon** gives you access to the Project parameters and statistics (see next section).
- **The Pause icon** allows you to temporarily suspend the time recording for the current model. Click again on the red circle to resume time tracking.



### 3) Setting the alarm for the Visual Clock

As of version 1.2, you can optionally set a **target time** for the project, as well as an **alarm threshold** (75% by default).

Idle Time: 5 minutes

Target Time (hh:mm): 4h00 Alarm at: 75 %

The clock will indicate visually where you stand in the achievement of your target.

Say that you set a target time at 4h, with a threshold of 75%:

Mode <b>Normal</b>	Time spent is $< 75\% * 4h = 3h$	
Mode <b>Warning</b>	Time spent is between 3h and 4h	
Mode <b>Over</b>	Time spent is $> 4h$	

If you enter nothing in the field “Target Time”, then no alarm is set.

### 4) Managing Tracking Projects and Models

This section applies when a model is attached to a tracking project.

- Click on the wrench icon in the Clock Window or the SUClock toolbar icon (or select menu *Configure Tracking project*).
- A **dialog box** will appear.

**Project Parameters**

Project Name: aclock 22

Active time spent: 43:14:38

...in Current Session: 0:00:03

Idle Time: 5 minutes

Target Time (hh:mm): Alarm at: 75 %

Directory: D:/Documents/Doc/AA\_SKU/Ruby/All Models

Temporary files in: c:/temp

Created on: 03-Jun-11 07:11

**Tracking of the Model in Project**

[Detach from Project](#) [Attach to New Project](#) [Attach to an existing Project](#)

[Merge with another project](#) [Reset project](#)

[Recents Projects](#) [Purge](#)

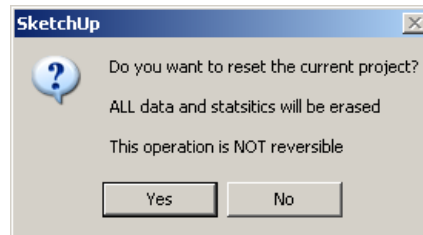
[AFSPLINE2](#)

**Statistics**

Day / Month SU Tools SKP Models

Done

- c) **Idle Time** can be modified for the Tracking Project. It is given in minutes, with a minimum of 1 minute. If you enter a large value (say 999 minutes), then it means that time will always be tracked whether you are or not active in the model (you can go have lunch for 999 minutes!).
- d) **You can modify the attachment of the current model** to the Tracking Projects.
  - **Detach the model** from the Project. The model will no longer be tracked
  - Attach the model to either a **new project** or to another **existing project** (via the Ask path dialog box or recent projects)
- e) **Reset Project:** you can reset all data of the project to zero. A confirmation message will be displayed as this operation is not reversible.



- f) **Import data from another Project:** the objective is to integrate all the data of another project into the current project. The other project will then be reset to zero.
  - You will first be asked for the location of the other project (.suclock file).
  - The importation will be performed
  - You will be asked whether the other project should be reset

## 5) Statistics

SUClock maintains some statistics about effective activity for each tracking project:

- By Models
- By Year / Month / Days
- By Tools (SU Tools and plugins)



Effective time are indicated in h:m:s, with overall percentage and percentage by category.

You can view, print and export (with various formats) these statistics.

Note that Print will use the tree expansion state as displayed in the dialog box.

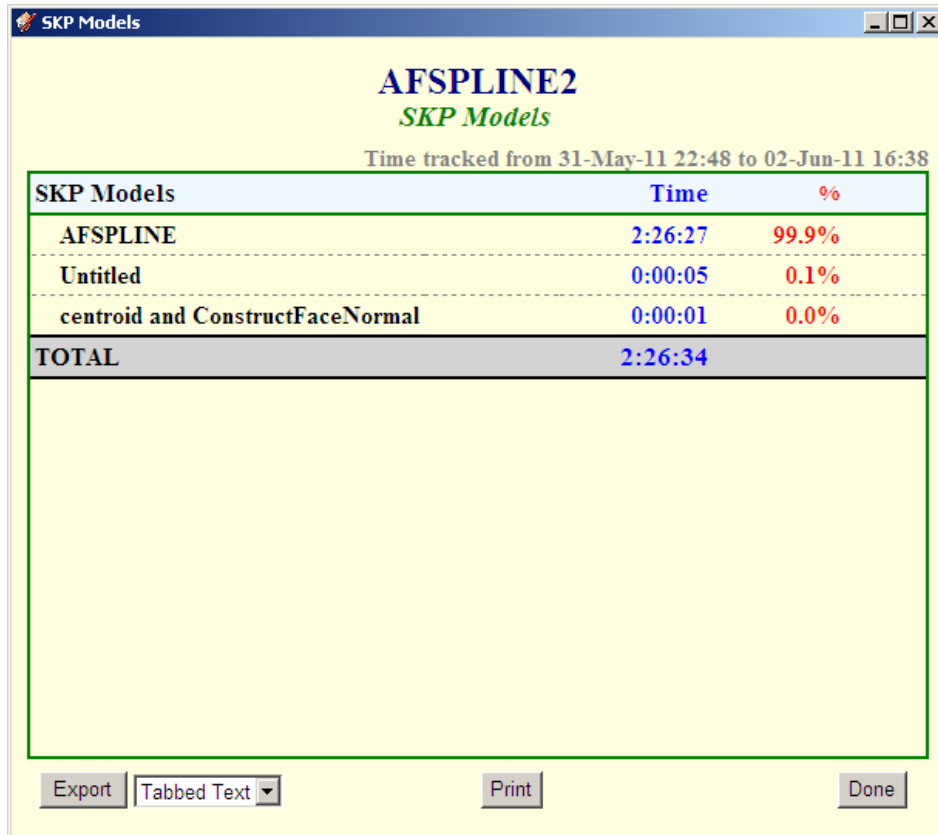
## 1) By Tools (SU Native tools and interactive Ruby scripts)

AFSPLINE2			
SU Tools			
Time tracked from 31-May-11 22:48 to 02-Jun-11 16:39			
SU and Ruby Tools	%%	Time	%
Selection Mode		2:26:22	99.3%
<input checked="" type="checkbox"/> Sketchup Tools		0:00:34	0.4%
Circle	32.5%	0:00:11	0.1%
Line	26.9%	0:00:09	0.1%
Offset	9.9%	0:00:03	0.0%
Rectangle	9.6%	0:00:03	0.0%
Freehand	9.5%	0:00:03	0.0%
Arc	6.6%	0:00:02	0.0%
Polygon	5.0%	0:00:01	0.0%
<input checked="" type="checkbox"/> Ruby Scripts		0:00:23	0.3%
FredoSpline	68.5%	0:00:16	0.2%
FredoScale	15.7%	0:00:03	0.0%
JoinPushPull	8.4%	0:00:02	0.0%
RoundCorner	7.4%	0:00:01	0.0%
<b>TOTAL</b>		<b>2:27:20</b>	
<div>Export</div> <div>Tabbed Text</div> <div>Print</div> <div>Done</div>			

## 2) By Date

AFSPLINE2			
Day / Month			
Time tracked from 31-May-11 22:48 to 02-Jun-11 16:38			
Month / Day	%%	Time	%
<input checked="" type="checkbox"/> 2011		2:26:34	100.0%
<input checked="" type="checkbox"/> Jun 2011		1:16:15	52.0%
Thu 02 Jun	96.0%	1:13:13	50.0%
Wed 01 Jun	4.0%	0:03:01	2.1%
<input checked="" type="checkbox"/> May 2011		1:10:18	48.0%
Tue 31 May	100.0%	1:10:18	48.0%
<b>TOTAL</b>		<b>2:26:34</b>	
<div>Export</div> <div>Tabbed Text</div> <div>Print</div> <div>Done</div>			

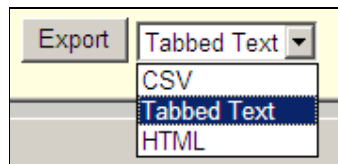
### 3) By Sketchup Models (SKP files)



The screenshot shows a window titled "SKP Models" with a yellow background. At the top, it says "AFSPLINE2" in blue and "SKP Models" in green. Below that, it says "Time tracked from 31-May-11 22:48 to 02-Jun-11 16:38". A table lists the models and their tracking times and percentages. The table has three columns: "SKP Models", "Time", and "%". The rows are: "AFSPLINE" (2:26:27, 99.9%), "Untitled" (0:00:05, 0.1%), and "centroid and ConstructFaceNormal" (0:00:01, 0.0%). A "TOTAL" row is at the bottom with a time of 2:26:34. At the bottom of the window, there are buttons for "Export", "Tabbed Text" (with a dropdown arrow), "Print", and "Done".

SKP Models	Time	%
AFSPLINE	2:26:27	99.9%
Untitled	0:00:05	0.1%
centroid and ConstructFaceNormal	0:00:01	0.0%
<b>TOTAL</b>	<b>2:26:34</b>	

#### Export Options:



- **CSV**: fields are separated by comma and can be imported to Excel. File extension is **.csv**
- **Tabbed Text**: fields are separated by a TAB character and are generated as a text file with extension **.txt**
- **HTML**: the content of the export file is similar to the Print, but as a file with extension **.html**.

The default export type can be specified as a Default Parameter.






### 4. About some differences between Windows and Mac

**In Windows**, there is only one SKP model per Sketchup instance, but you can have several instances of SU opened concurrently. If two or more instances are open on SKP files attached to the same tracking project, then, when switching from one to the other, you have to execute an activity (like mouse-wheel) to get the clock updated.

**On Mac**, you can open only a single instance of the Sketchup application, but you can have several models active within this model. When you switch from one model to another, the clock will be updated when you execute an activity (like mouse-wheel). Possibly, the clock will disappear or appear depending on whether the model is tracked or not.

The above limitations are simply due to the absence of event notification in the SU Ruby API when navigating between instances of Sketchup and between models within an instance.

**Height of the clock window:** as of version 1.2, it is possible to specify the height of the clock window. As there are so many system versions (Windows and Mac) and web browser versions, the clock window may be cropped. The default value is 50 pixels

<i>Parameters at startup of Sketchup</i>		
Idle time in minutes	<input type="text" value="5"/>	
OPT_Export	<input type="text" value="CSV"/>	
Height of the Clock window (in pixels)	<input type="text" value="50"/>	
Alarm threshold when tracking target time (in %)	<input type="text" value="75"/>	
Directory for temporary tracker files (useful for sharing on network). Make sure the Directory exists	<input type="text" value="--LOCAL--"/>	

## 5. Strategy for choosing the location of the *.suclock* files

The path to project tracking files (extension *.suclock*) is registered as an attribute of the models, in two forms:

- Absolute path
- Relative path to the model *.skp* file path

Depending on how you manage your files, you may consider to:

- 1) **Either store all *.suclock* files in one fixed directory**, regardless of where the models are stored. You can then freely reorganize the location of model *.skp* files without bothering about the *.suclock* files.
- 2) **Or store the *.suclock* file in the same folder as the model(s)**. In this case, it is recommended to move both the *.skp* and *.suclock* files together whenever you reorganize your files.

Note that if SUClock cannot locate the tracking project file attached to a model, you will be prompted with a File panel to locate it only when you try to re-attach it to a tracking project. This avoids other users being bothered by time tracking when you send out a SKP file (or post it to a forum).

**CAUTION:** if you put suclock files on a **shared drive** to allow multi-user configuration, then you must also put the temporary files on a shared drive (*see next section*).

## 6. Temporary files

SUClock use some temporary files at run time:

- *Suclock\_mru.tmp*: list of recent tracking project files
- *Suclock\_last\_tracked.tmp*: a very small file to track the last activity time across SU instances.
- Runtime *.suclock.txt* and *.sustats.txt* temporary files, very small, which are used for tracking time across models during a Sketchup session.





All these files are stored in the local temporary directories defined in your system. By default:

- **On Windows:** in the user local settings folder (same as where Sketchup stores its own temporary files), typically (on XP):  
C:\Documents and Settings\<user>\s\Local Settings\Temp
- **On Mac:** in the */tmp* folder.

You can leave these temporary files where they are, but there is no inconvenience to purge them, preferably when you don't have Sketchup opened.

As of version 1.2, it is possible to customize the directory for these temporary files. In particular, this allows to put them on a shared drive and thus allow several users to work concurrently on the same project on the network.

The location of the temporary files can be configured in the Default Parameter dialog box. You must make sure it does exist.

Parameters at startup of Sketchup		
Idle time in minutes	<input type="text" value="5"/>	
OPT_Export	<input type="text" value="CSV"/>	
Height of the Clock window (in pixels)	<input type="text" value="50"/>	
Alarm threshold when tracking target time (in %)	<input type="text" value="75"/>	
Directory for temporary tracker files (useful for sharing on network). Make sure the Directory exists	<input type="text" value="--LOCAL--"/>	