

Cloud samples quick tutorial

1. Example.dat

Start SU and select "Import points cloud" from the Plugins menu.

Browse your disk to find "example.dat" and select it, click on "Open"

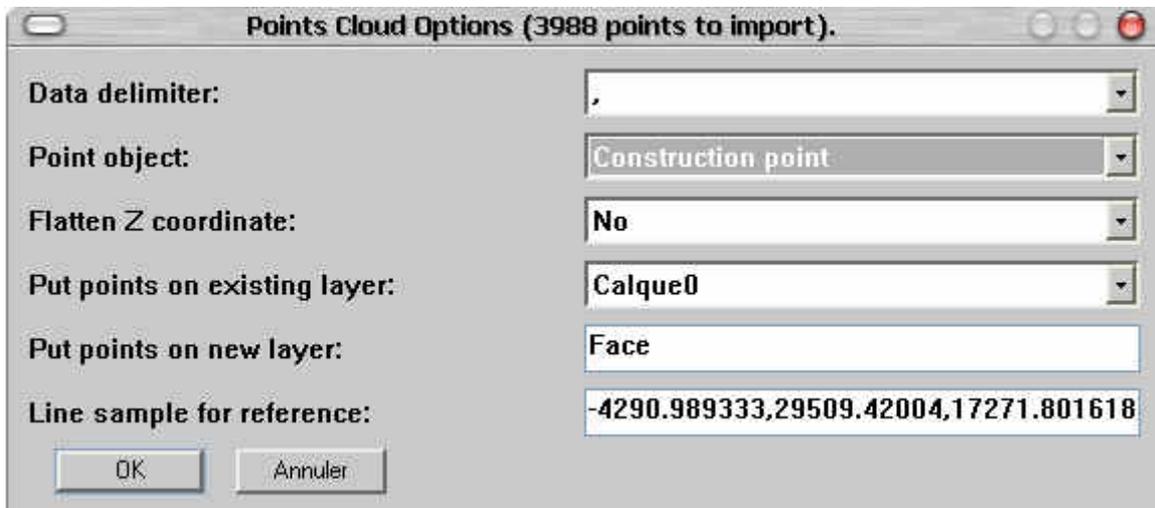
Below are the first four lines of this file:

```
-4290.989333,29509.42004,17271.801618  
-4274.989333,29511.005136,17286.136452  
-4289.989333,29488.014542,17264.960225
```

As you can see there are only 3 data for each line, separated by a comma; X,Y,Z

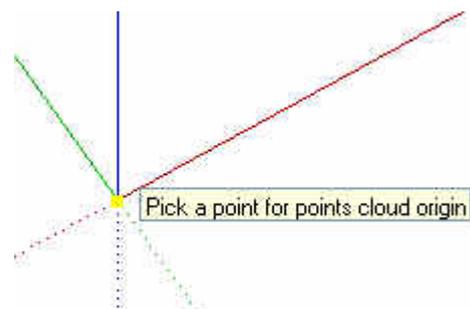
- **Select the comma separator in the dropdown list,**
- **Each point of the data file will be represented by a construction point,**
- **We don't want to flatten the result so select "No" in the dropdown list,**
- **Type for instance "Face" to create a new layer on which points will be inserted.**

You should have the following dialog:



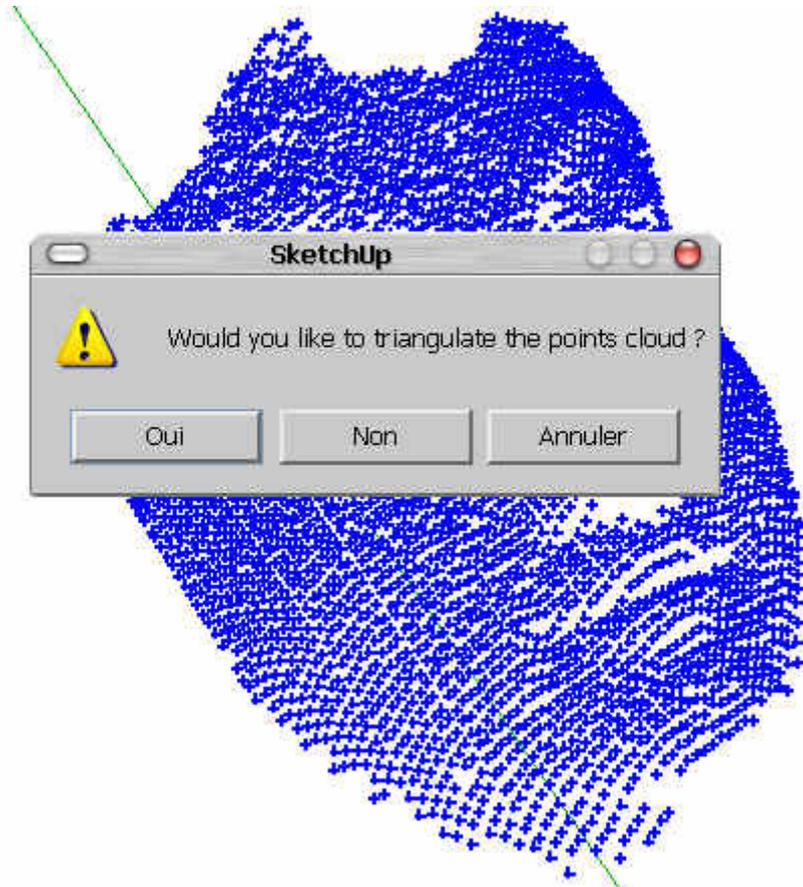
Hit the "OK" button.

You are prompted to click a point in your model: in this example I chose to click on the origin:



As soon as the point is clicked, the script reads the points in the data file. Watch the status bar to estimate how long this will take.

The following prompt is displayed when all points have been read:

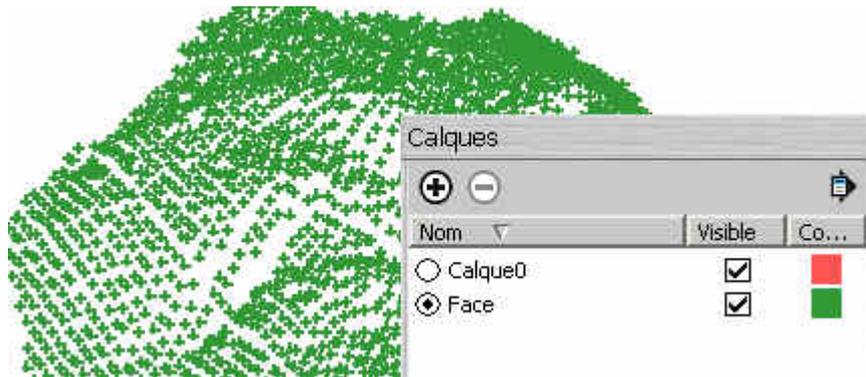


In this example, I select "No", the script ends with the below message:



Note that the points are still selected, and that they have been created on the new layer "Face".

Below a picture of the points once unselected, color by layer:



2. New.txt

Start SU and select "Import points cloud" from the Plugins menu.

Browse your disk to find "new.txt" and select it, click on "Open"

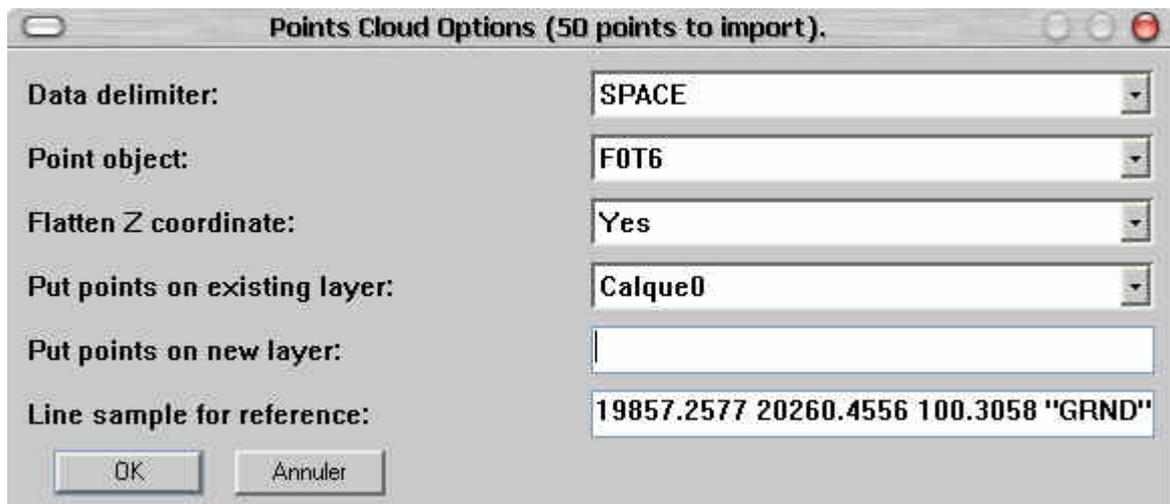
Below are the first four lines of this file:

```
19857.2577 20260.4556 100.3058 "GRND"  
19875.4801 20207.7198 101.0929 "GRND"  
19887.3953 20692.7130 96.4194 "GRND"  
19888.9069 21076.9713 95.4362 "GRND"
```

As you can see there are 4 data for each line, separated by a SPACE: X Y Z string
Note that X and Y coordinates are "big" numbers (around 20000) and that Z coordinates are around 100 units.

- **Select the SPACE separator in the dropdown list,**
- **Each point of the data file will be represented by a component of the model, here "FOT6" (a simple tree),**
- **We want to flatten the result so select "Yes" in the dropdown list,**
- **Don't type anything in the new layer field, so everything will be created on layer selected in the dropdown list, here "Calque0".**

You should have the following dialog:

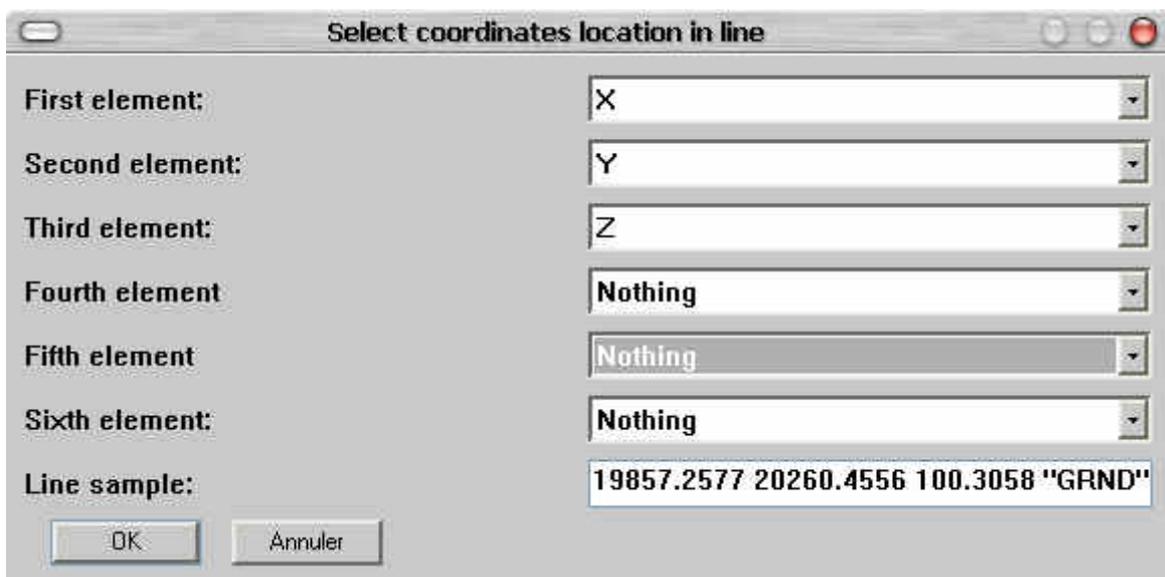


Hit the "OK" button.

The script detects that more than XYZ data are present in each line of the file, so the below message pops up:

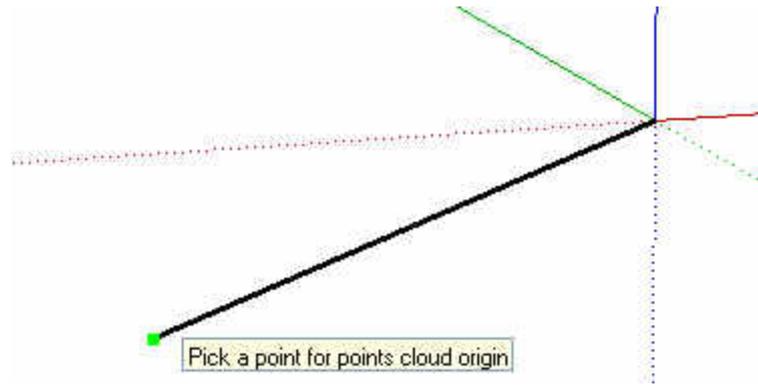


Hit the "OK" button, and locate X,Y and Z in the imported file.
In our case they are the first, second and third data:



You are prompted to click a point in your model: in this example I have drawn a line from origin to point -20000, -20000, 0.

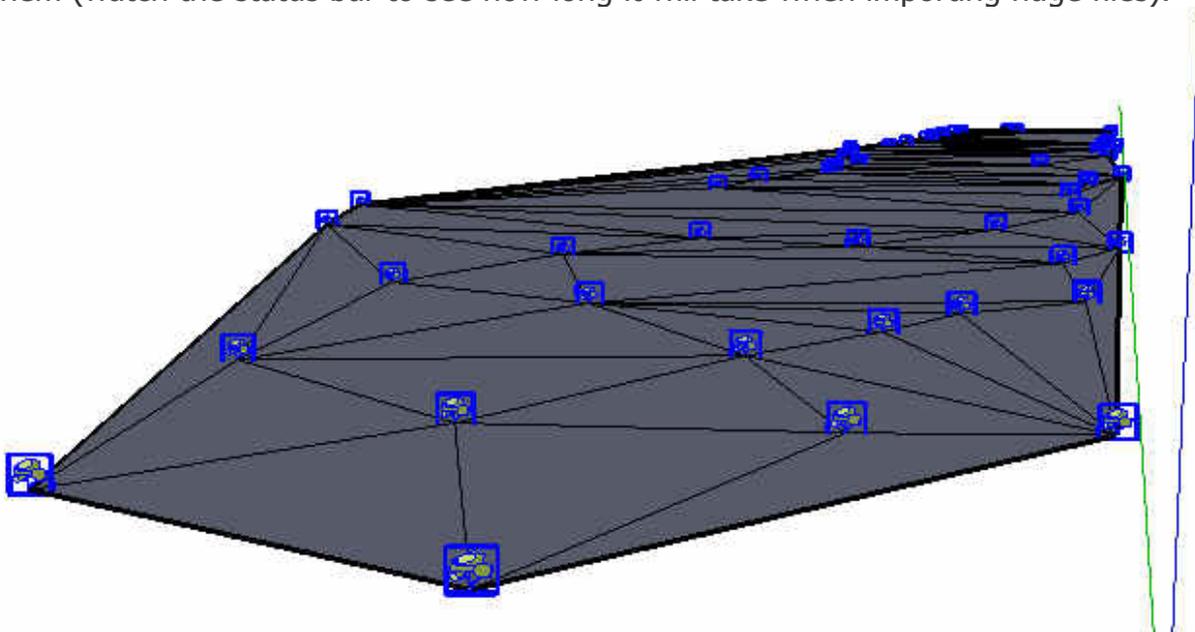
I will click at the end of this line. This will translate the origin of the imported file here, so the imported points will surely be around the SU origin.



As soon as the point is clicked, the script reads the points in the data file. Watch the status bar to see how long this will take. The following prompt is displayed when all points have been read:



In this example, I select "Yes", then all points are triangulated with faces between them (watch the status bar to see how long it will take when importing huge files).



Note that the components are still selected, that they have been created on the layer "Calque0", and that the ground is flat, every mesh point at $Z=0$.