

# NVIZ Flythrough and Multiple Attribute Points

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# TOC

- NVIZ: 3D navigation and flythroughs
  - Loading data
  - Navigation
- NVIZ: working with 3D vector points with multiple attributes
  - Different attribute value to each point
  - Multiple value for each point
  - Create and use Look Up Tables
  - Access the related DB info
  - Access external multimedia info
  - Highlight customization



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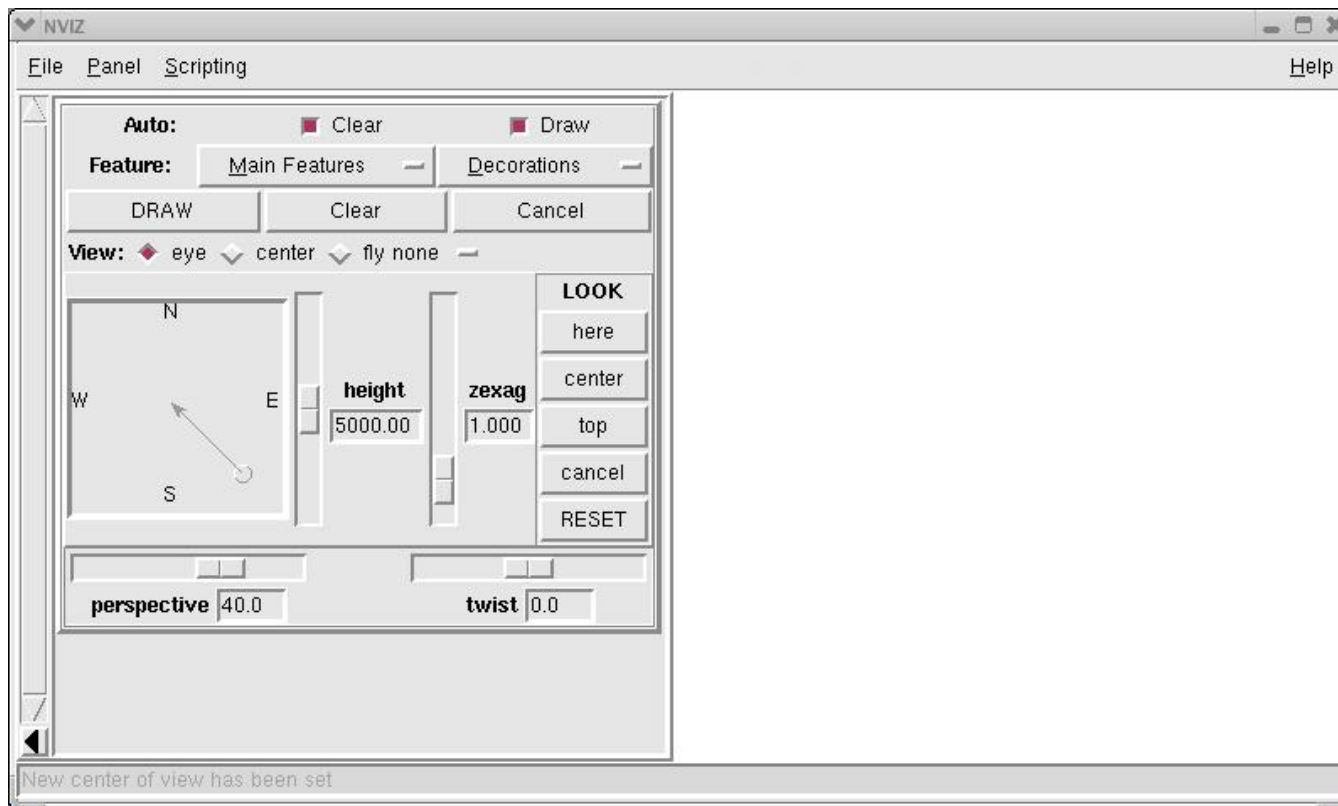
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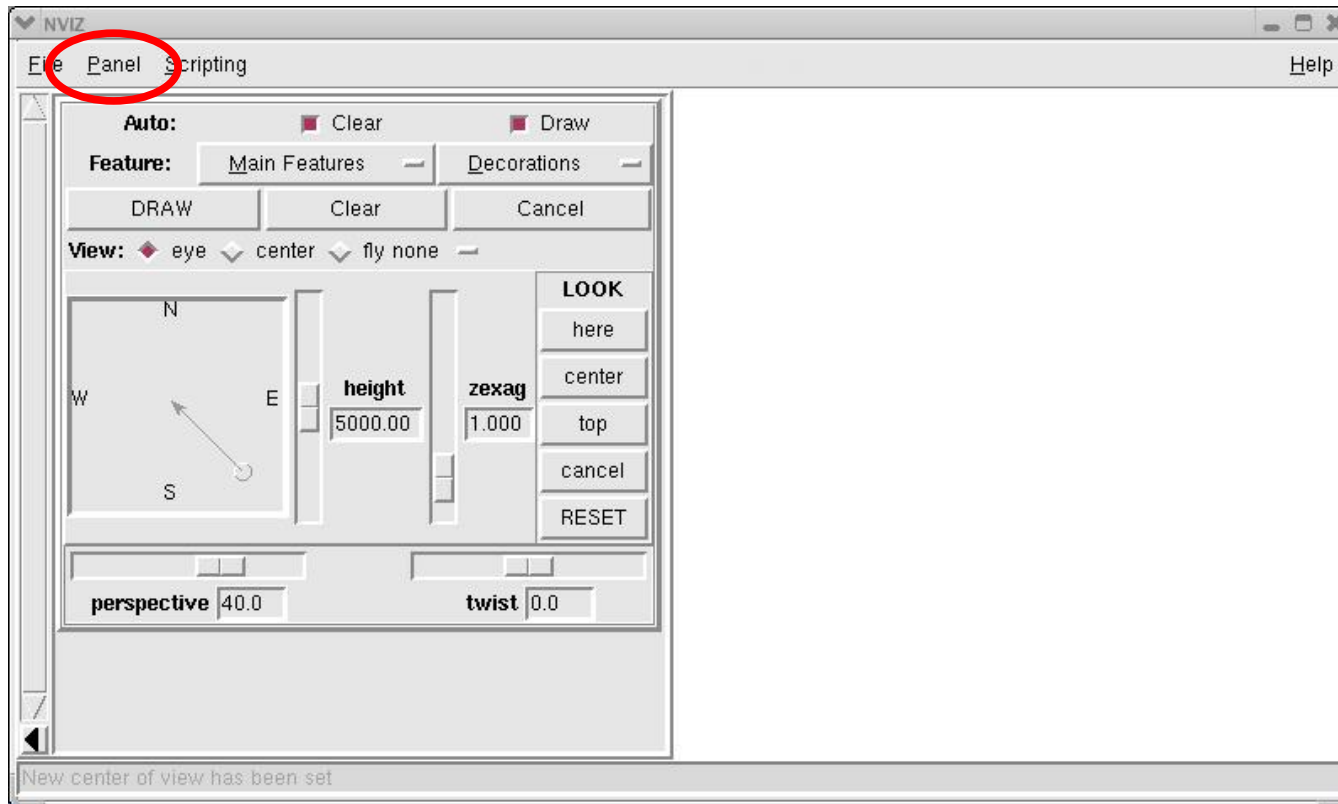
# Loading Data

Let's start NVIZ



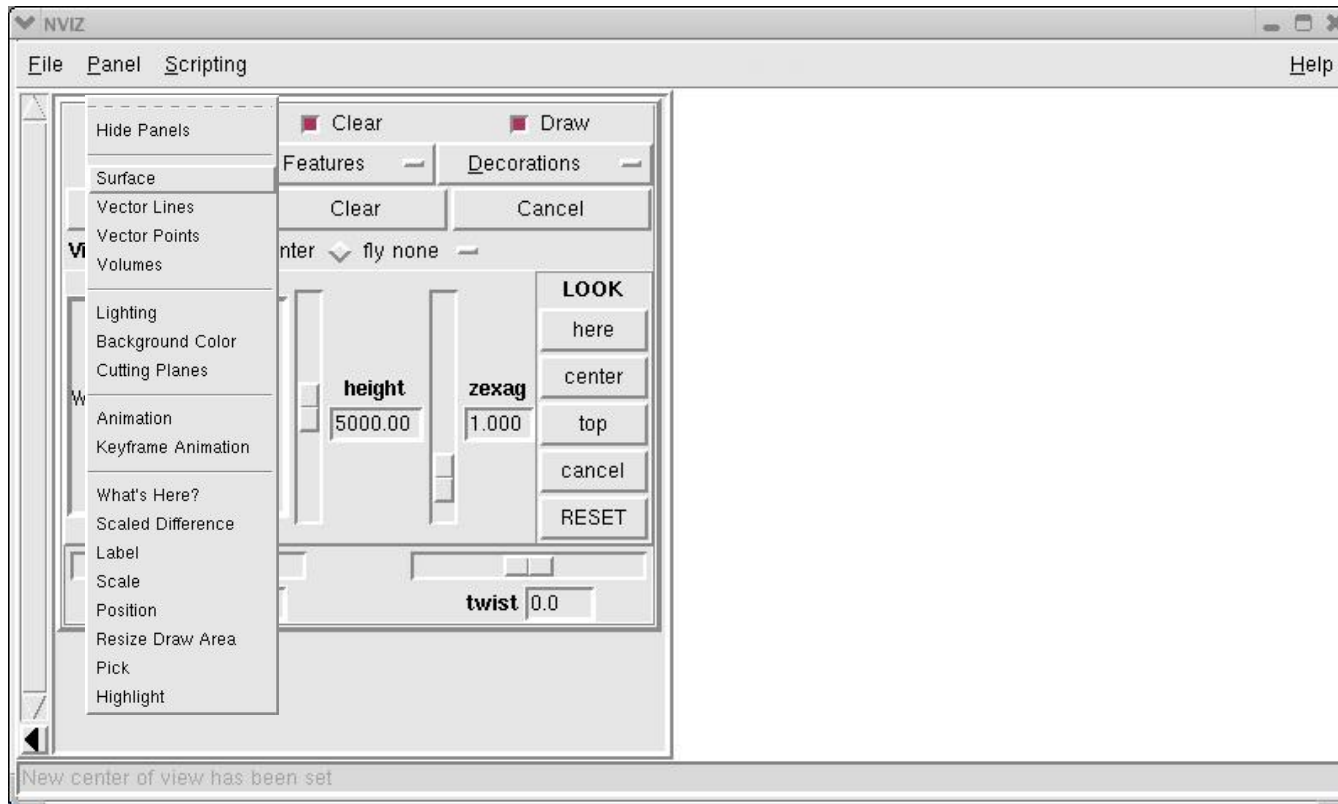
# Loading Data

Open the panel menu



# Loading Data

Open the panel menu

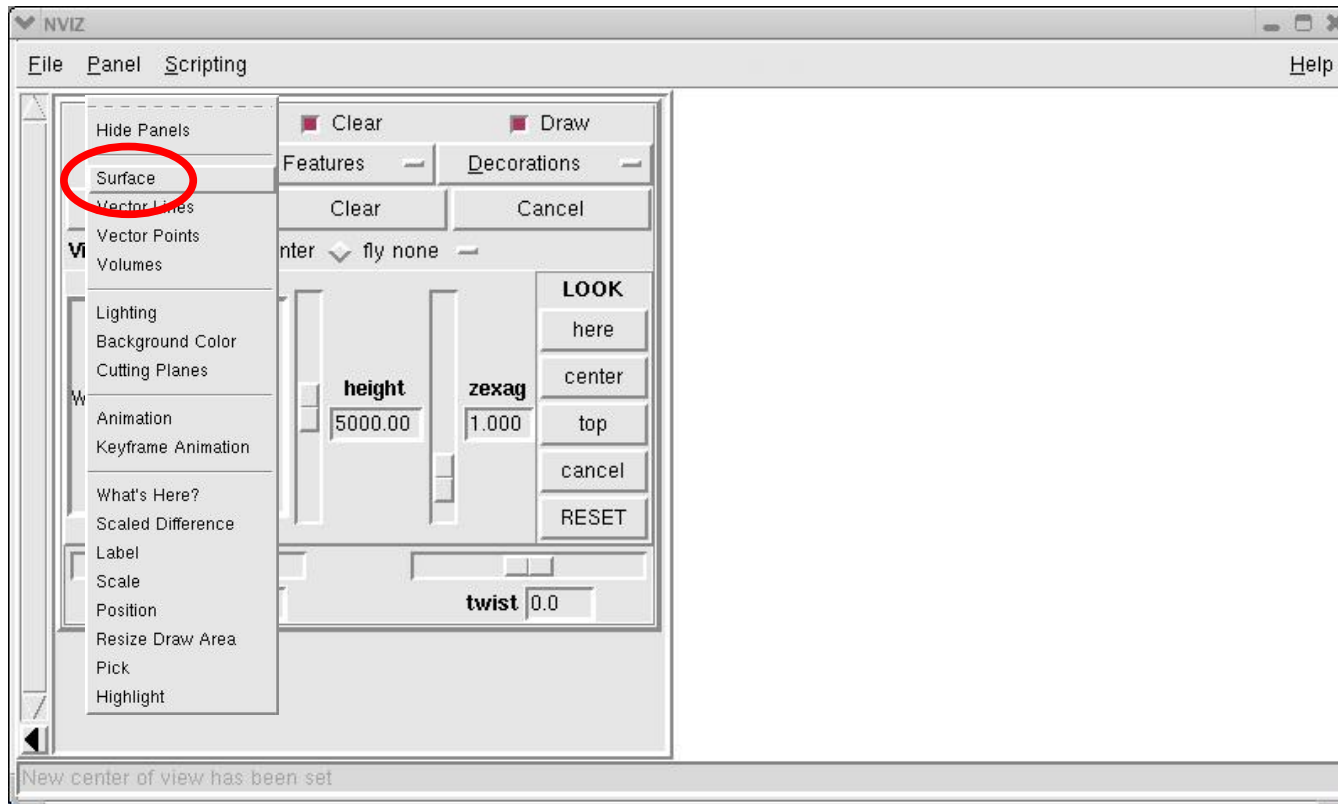


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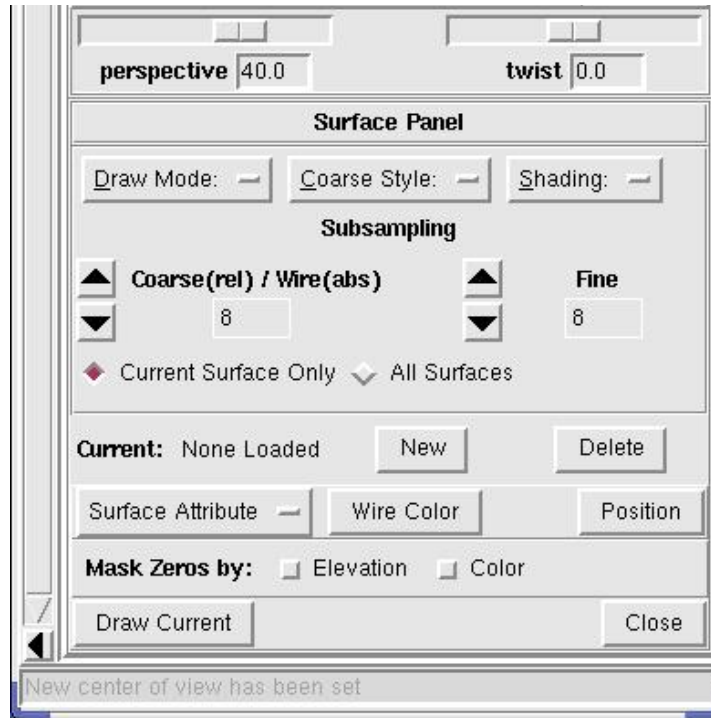
# Loading Data

Select surface



# Loading Data

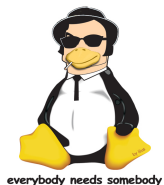
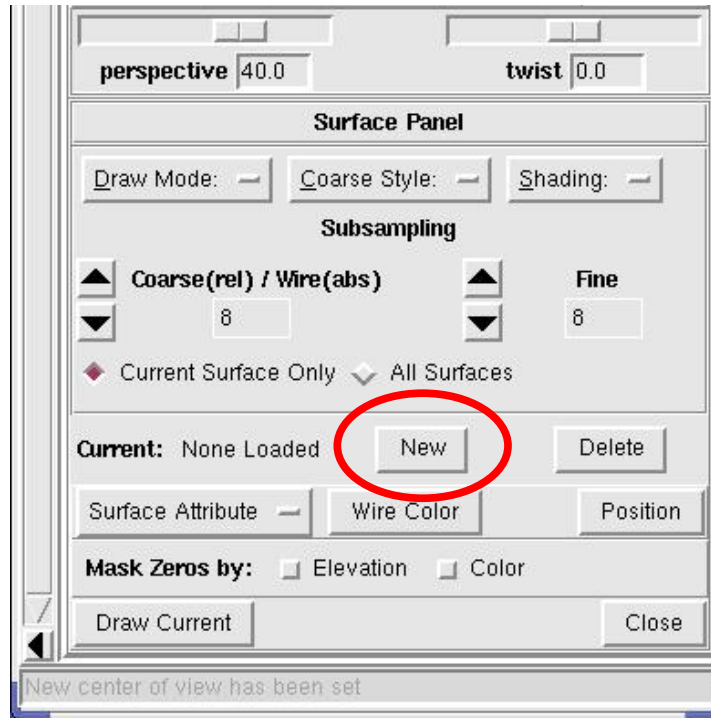
The surface panel shows up





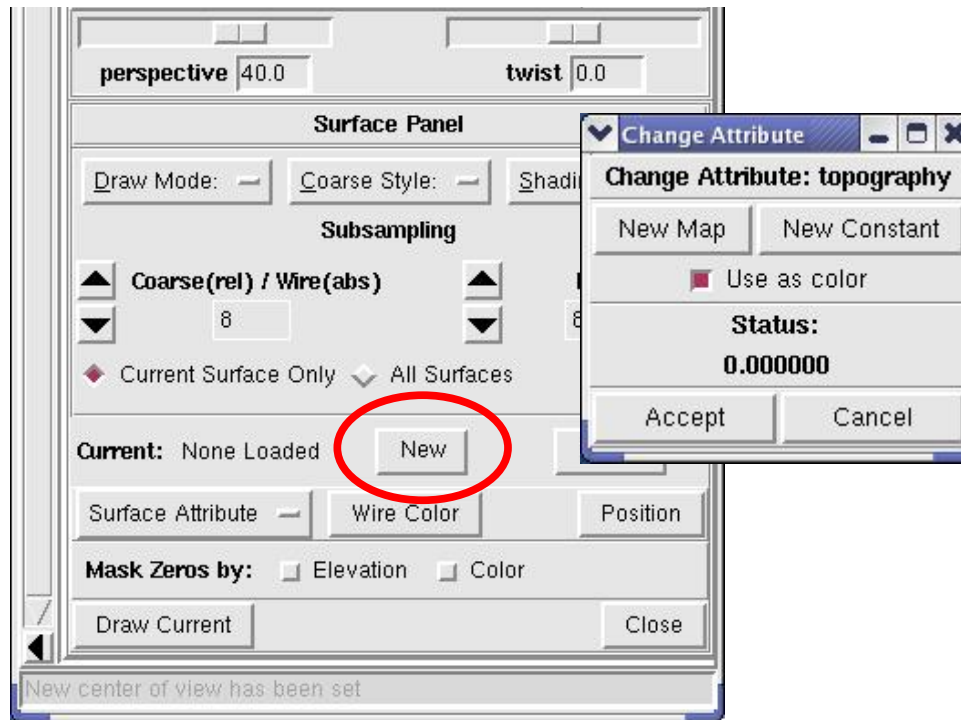
# Loading Data

Click the “New” button



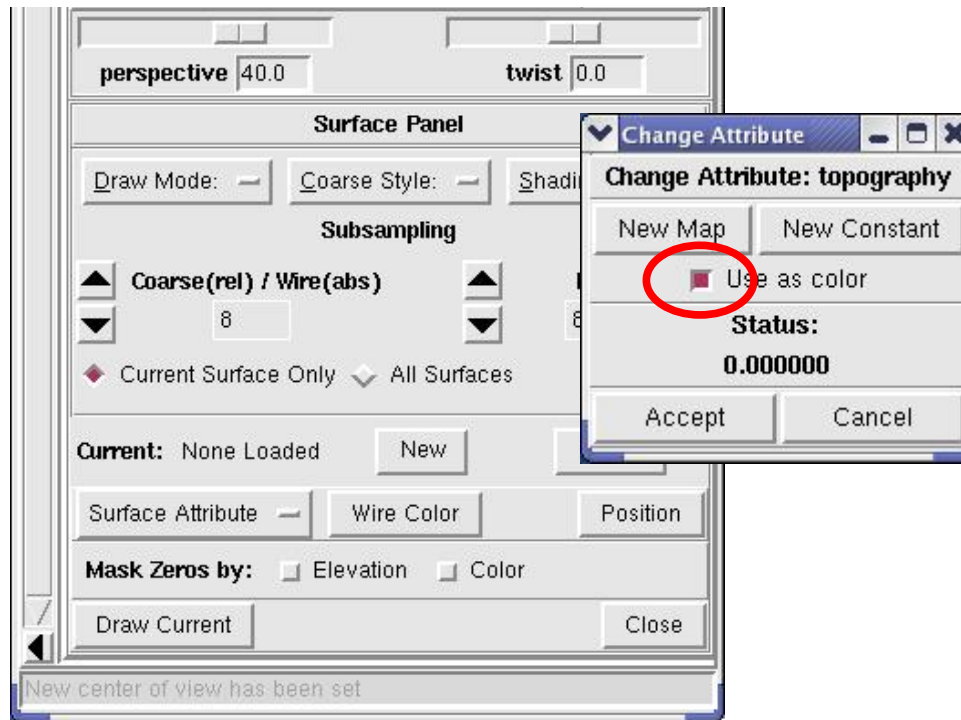
# Loading Data

The “New Map” panel shows up



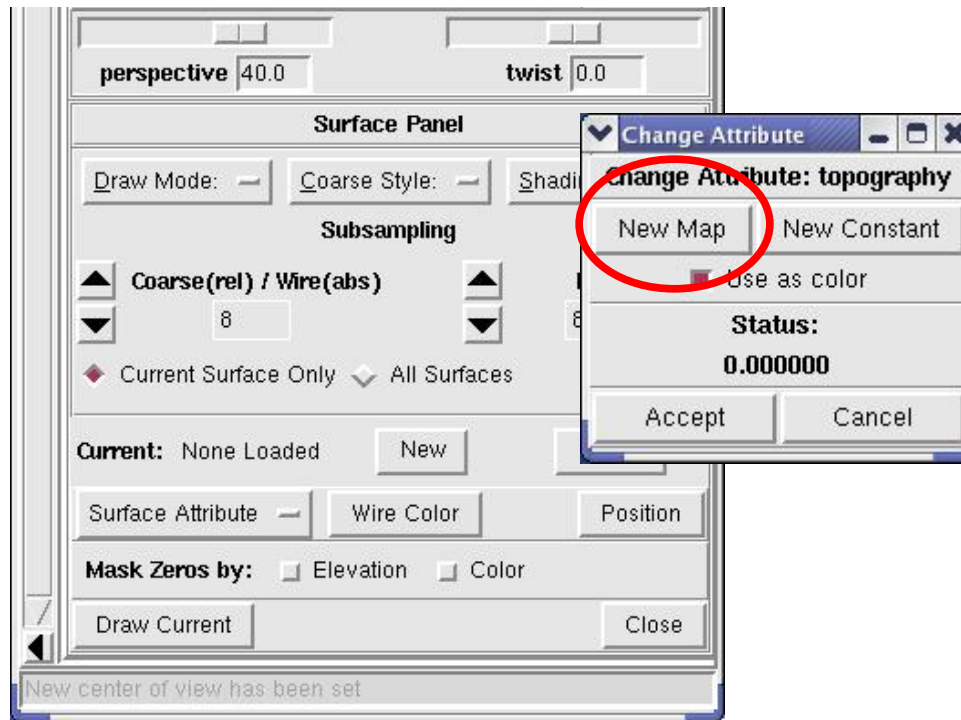
# Loading Data

Uncheck the “use as color” box



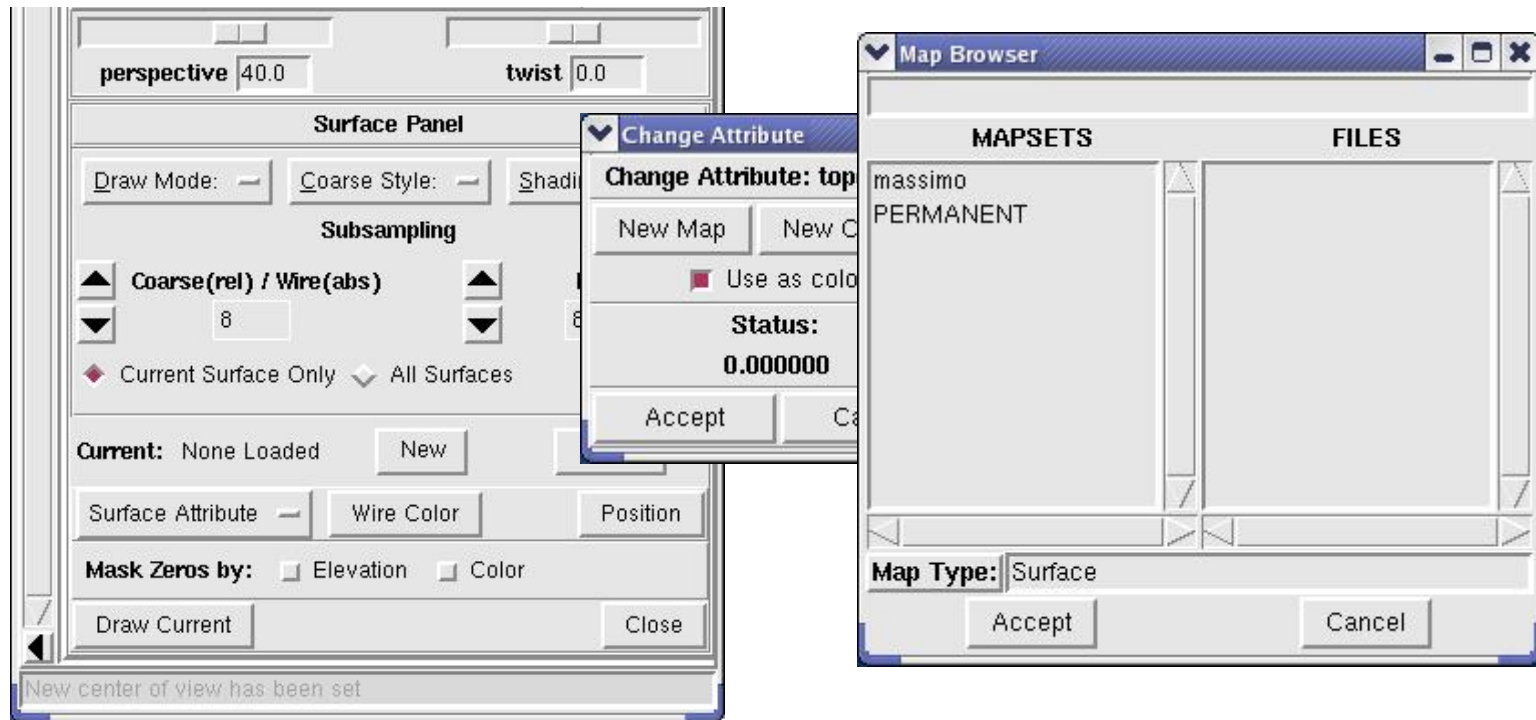
# Loading Data

Chose “New Map”



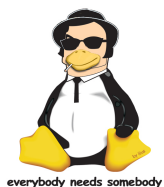
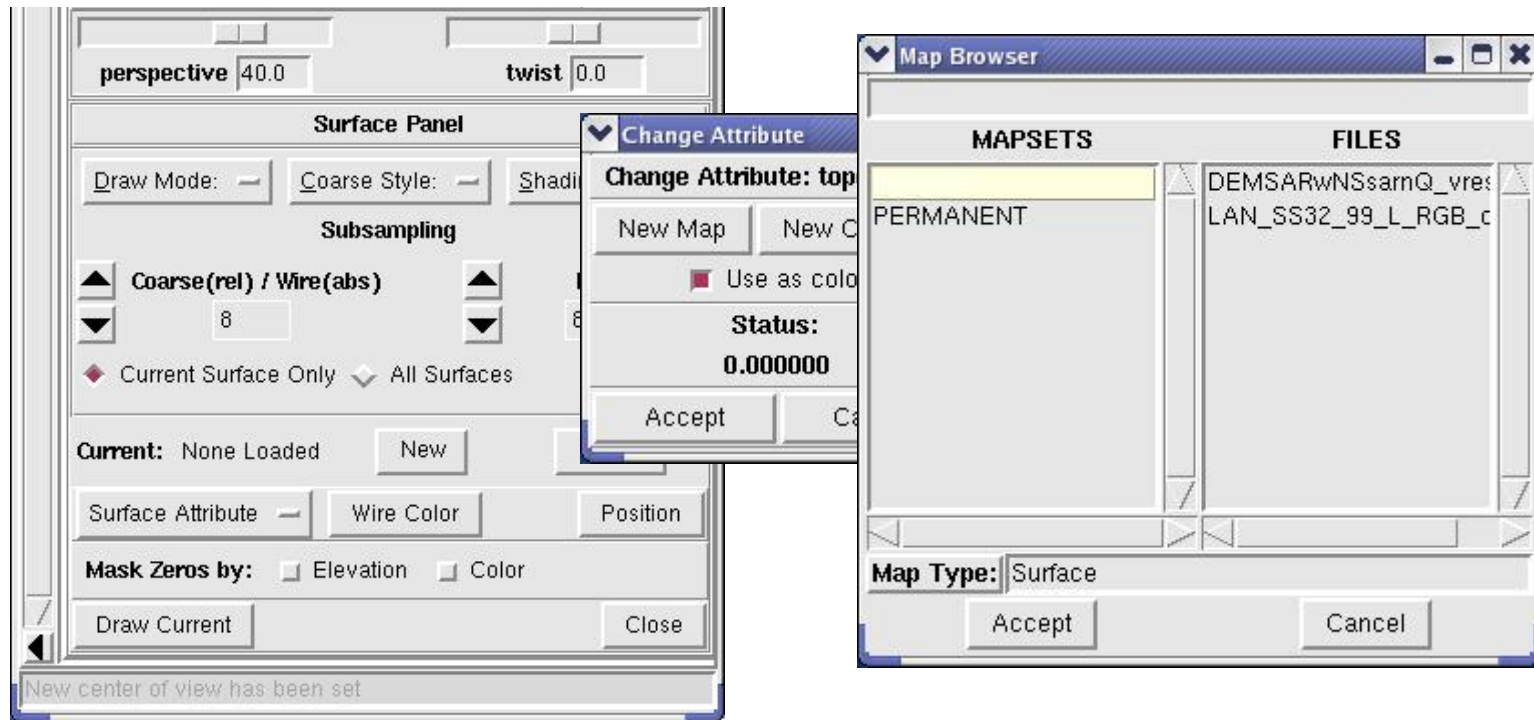
# Loading Data

The Map Browser shows up



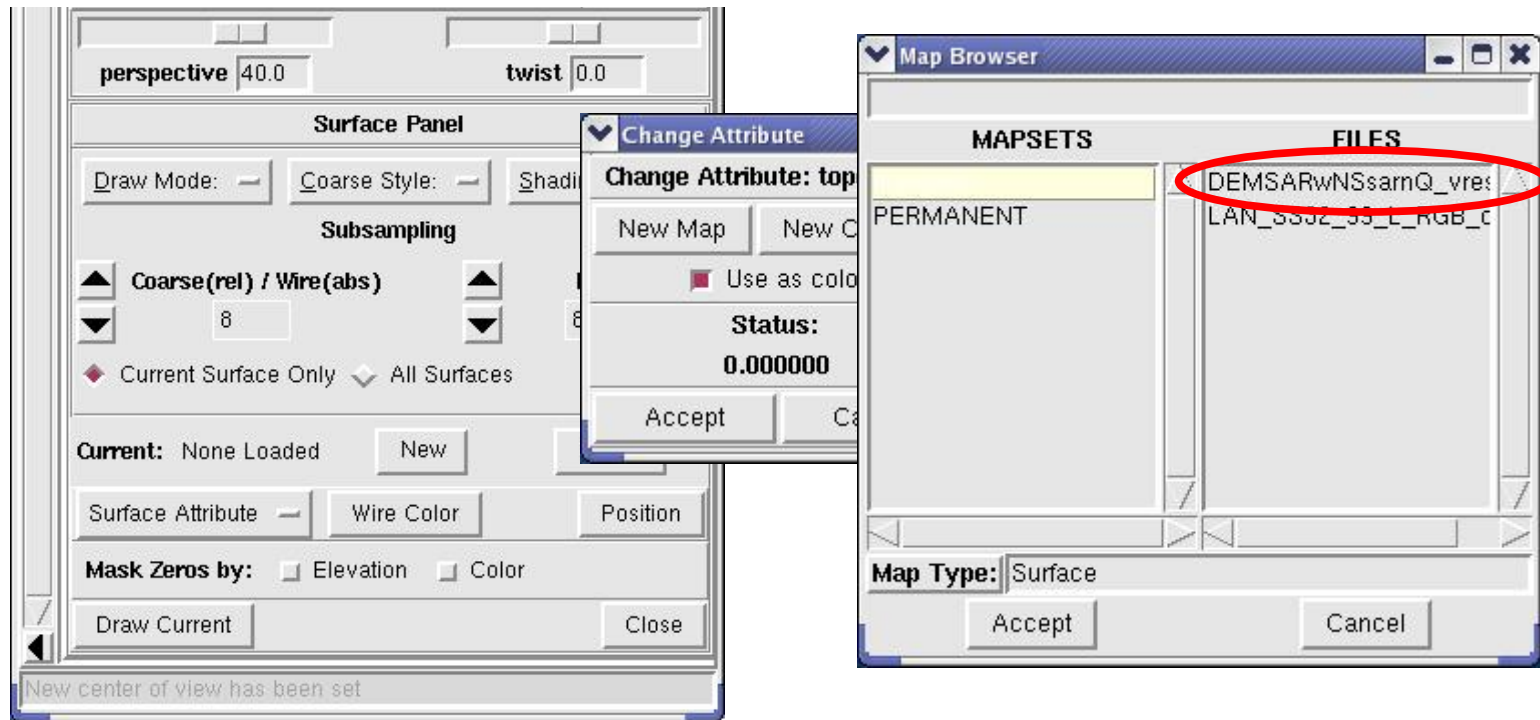
# Loading Data

Choose "massimo" in the MAPSETS



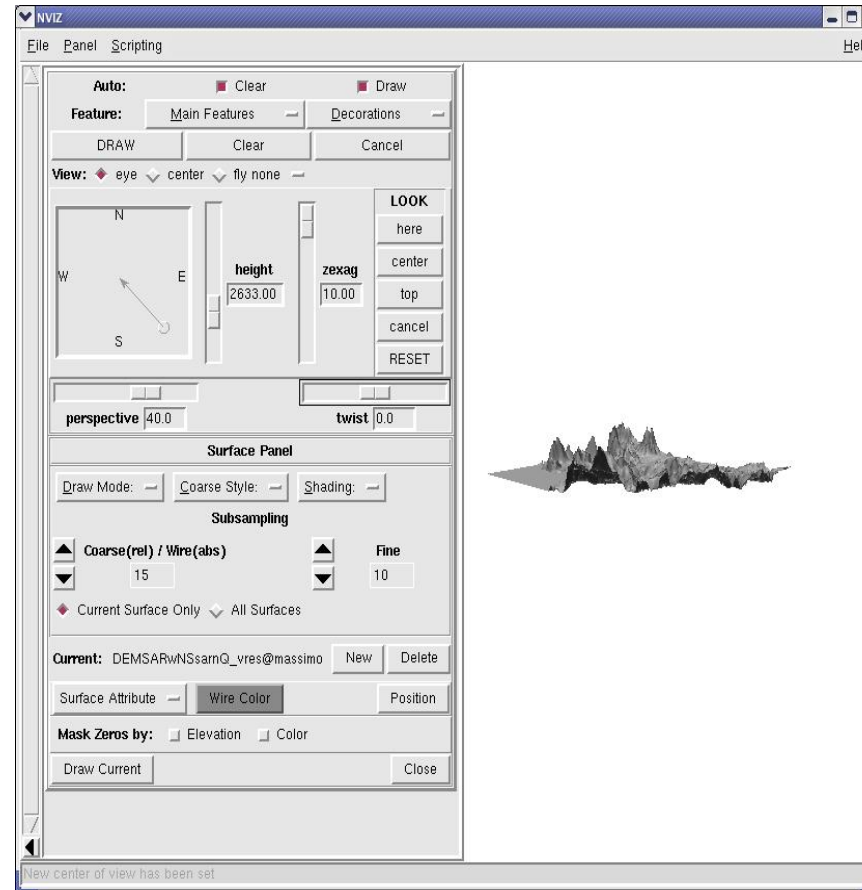
# Loading Data

Choose “massimo” in the MAPSETS, then DEM... and click “Accept” and “Accept”



# Loading Data

You should get something like this



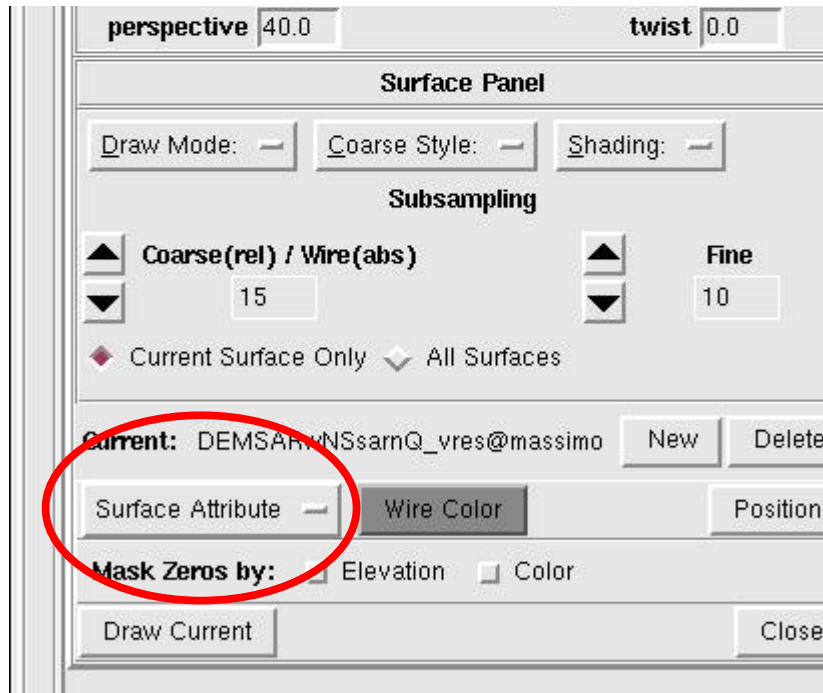
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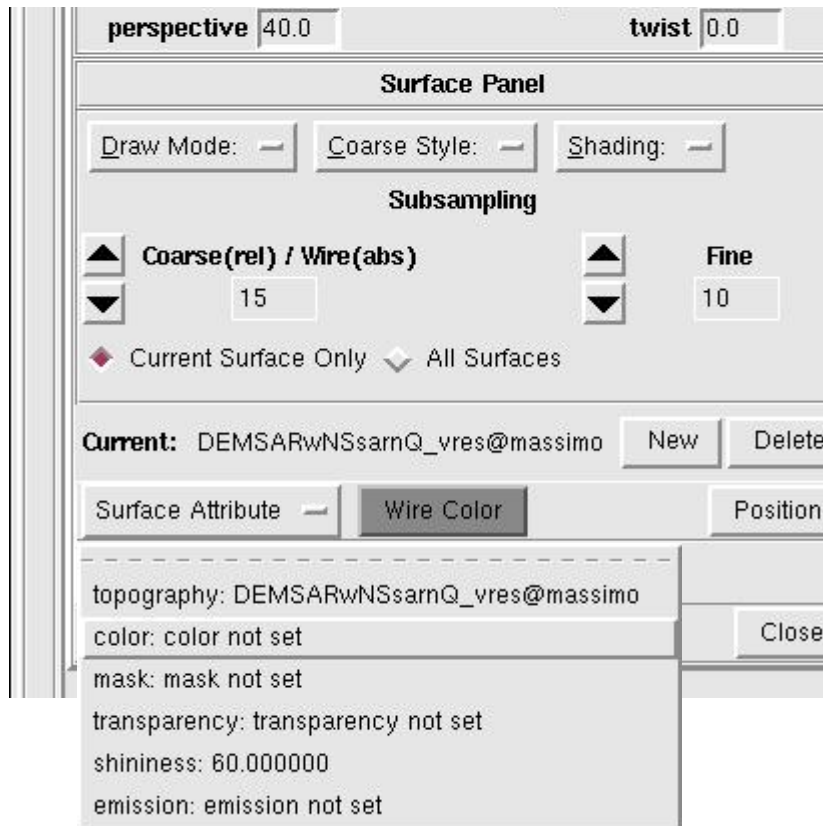
# Loading Data

Now let's add the color:



# Loading Data

Now let's add the color:



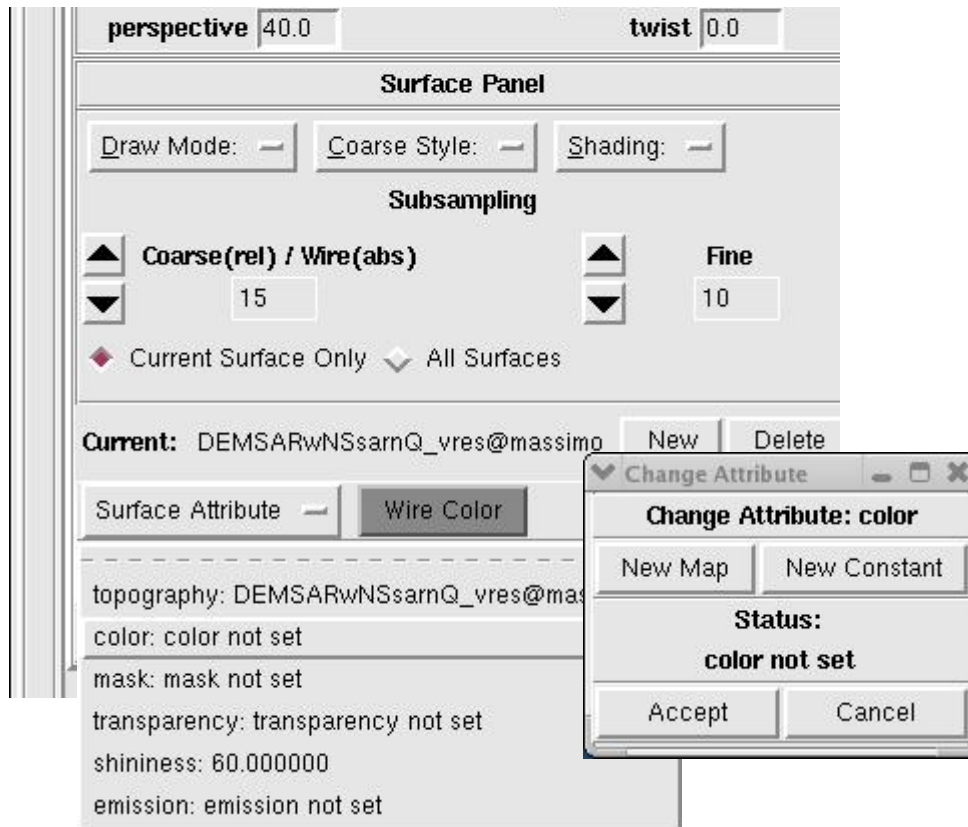
# Loading Data

Now let's add the color:



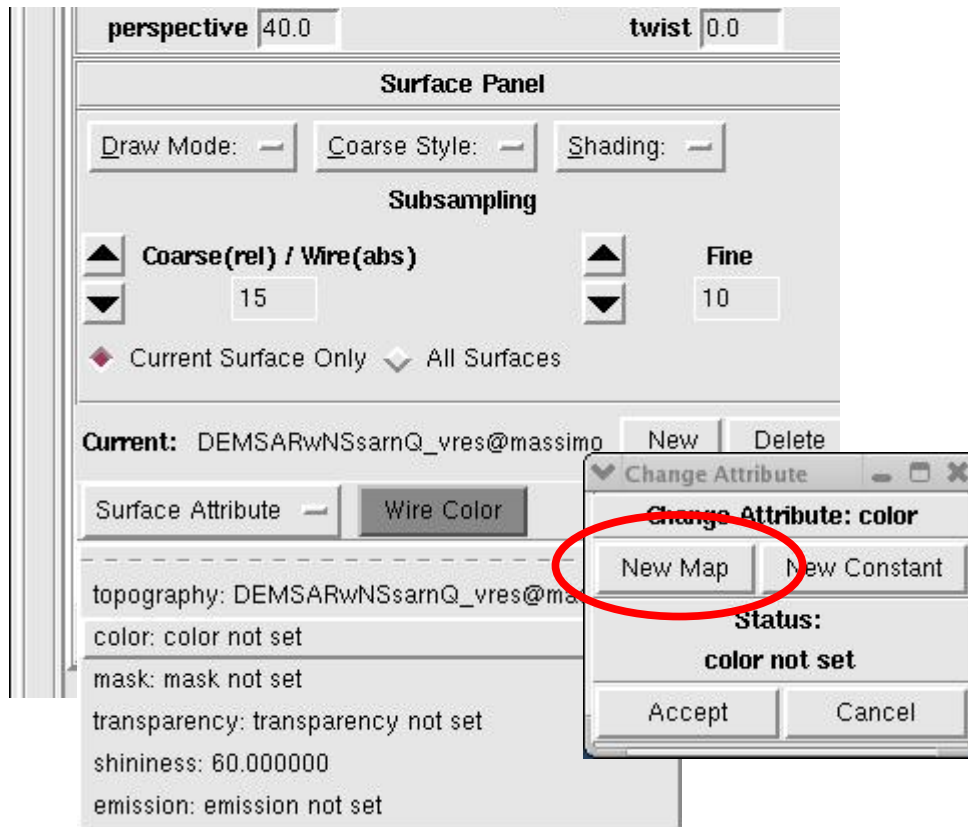
# Loading Data

Now let's add the color:



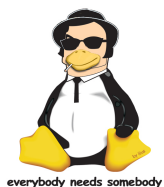
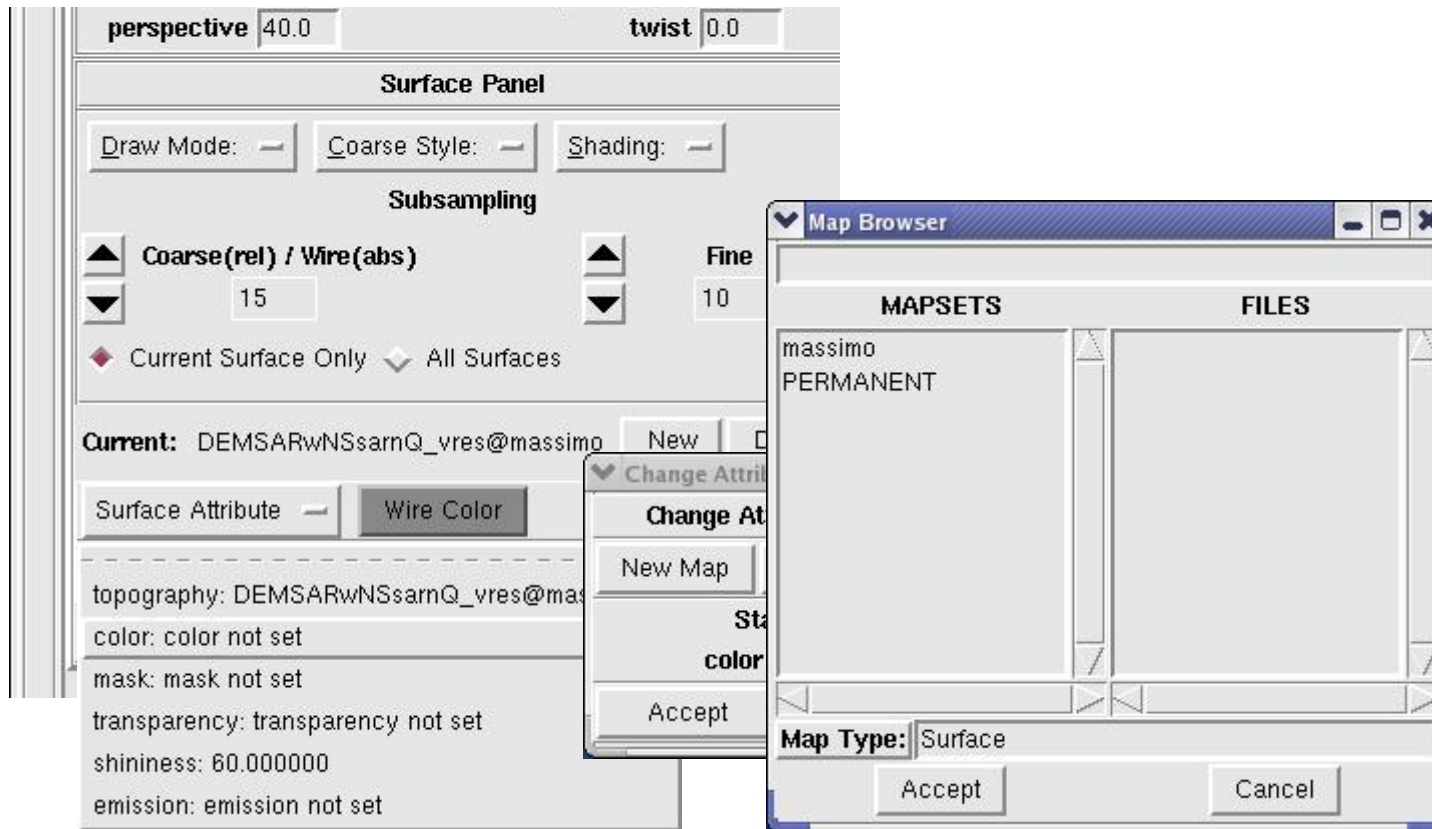
# Loading Data

Now let's add the color:



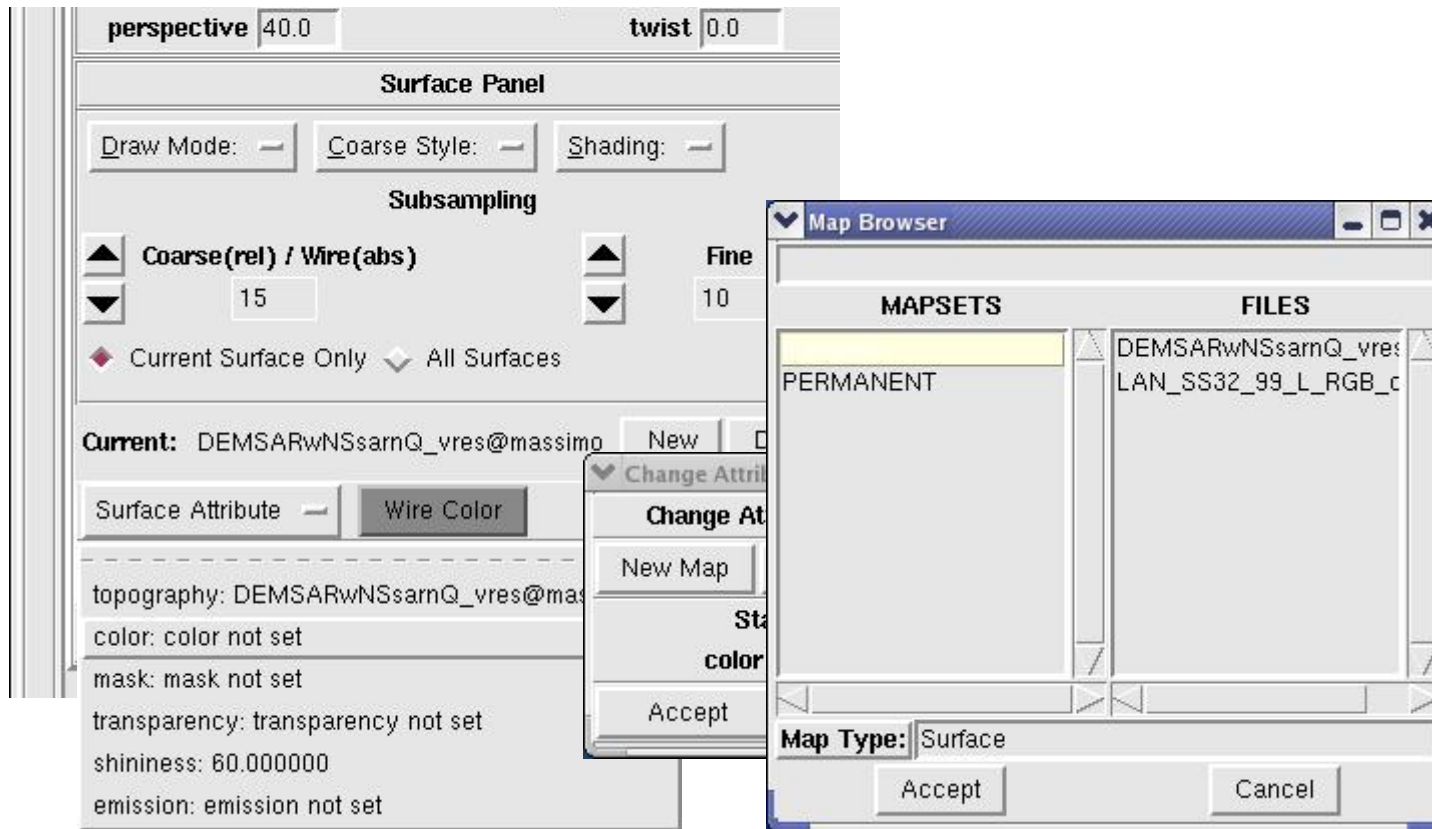
# Loading Data

Now let's add the color:



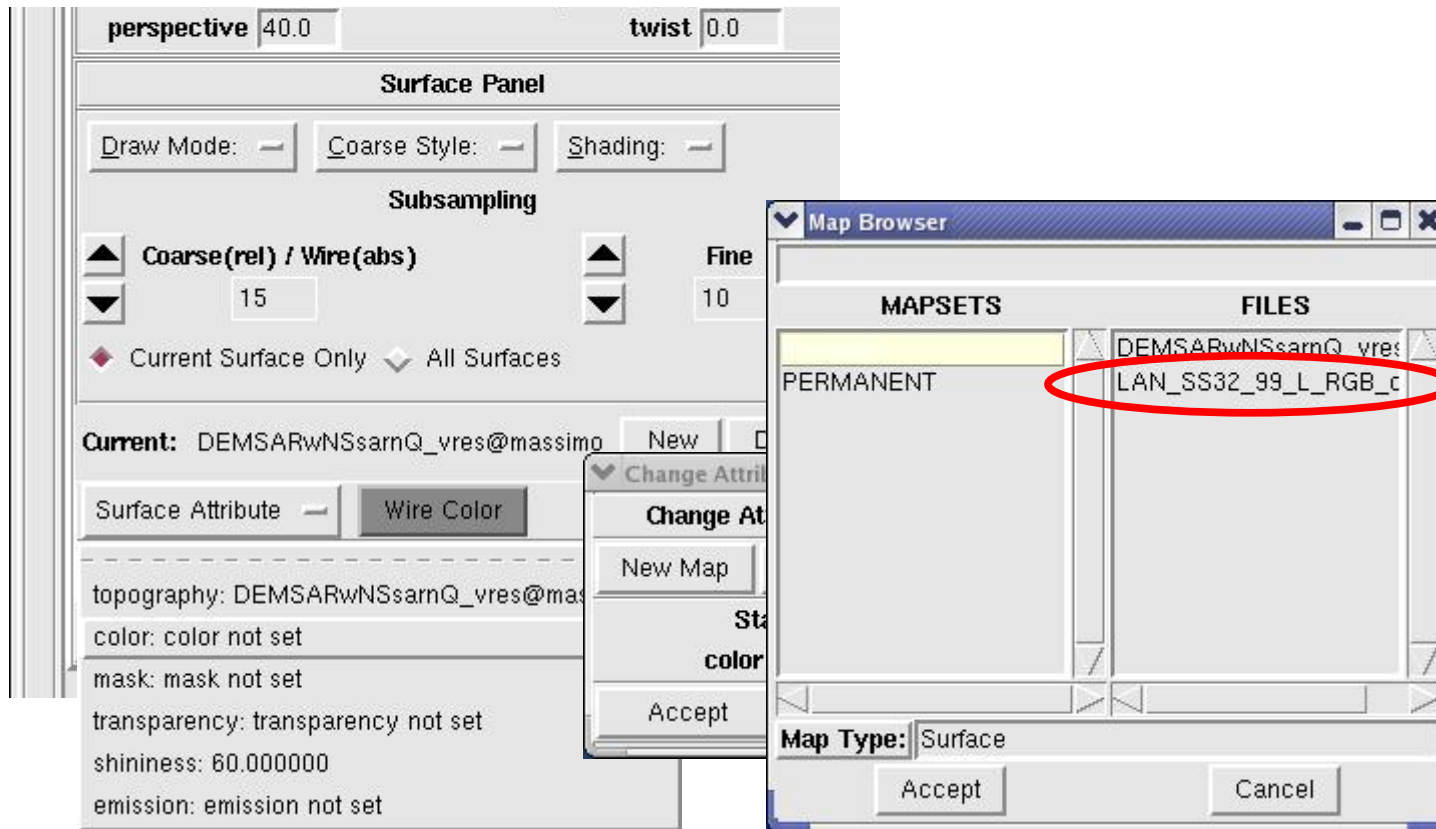
# Loading Data

Choose massimo



# Loading Data

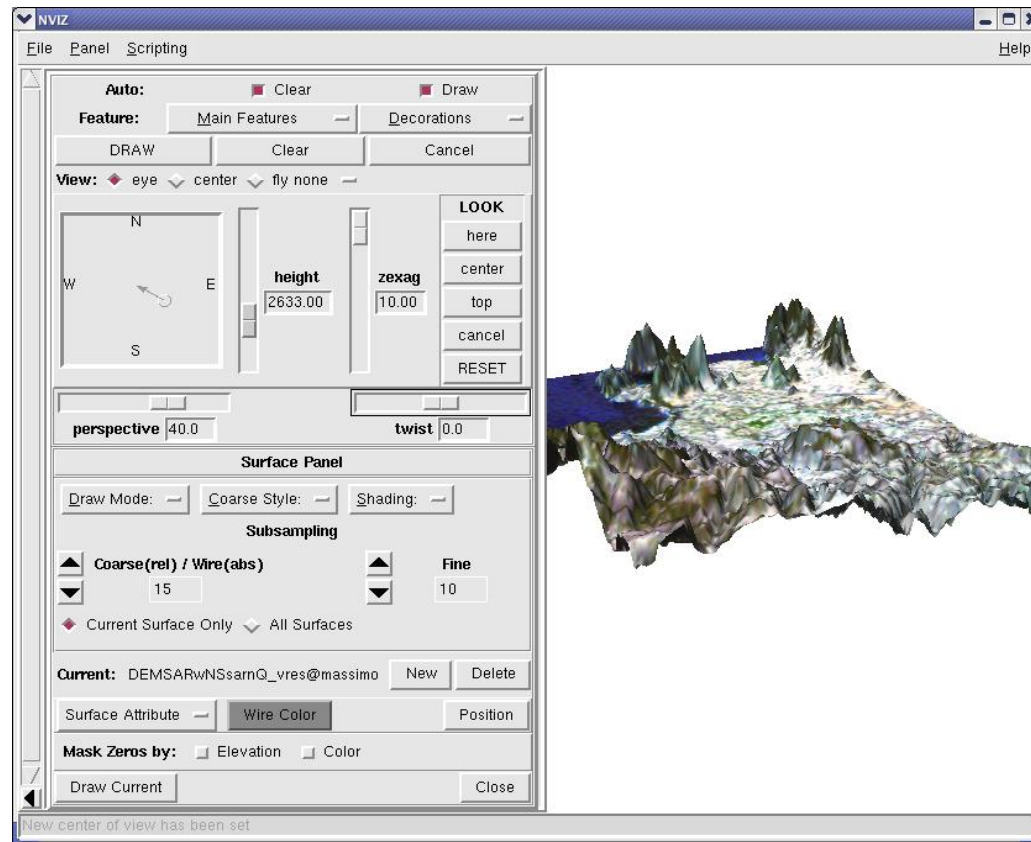
Choose massimo, then LAN... then "Accept", "Accept"





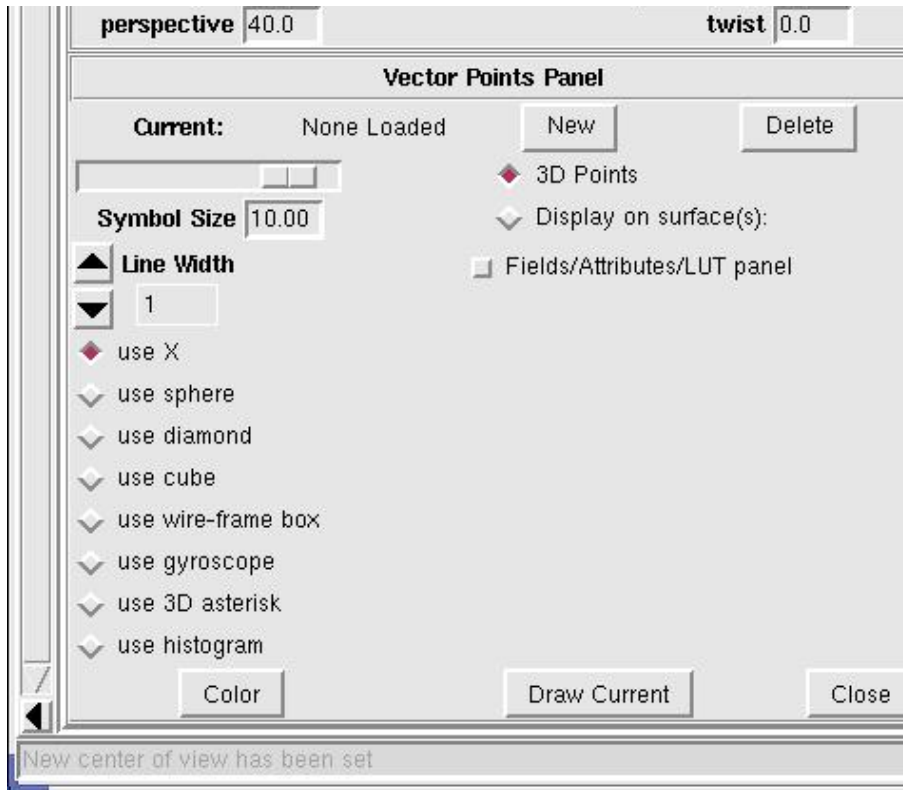
# Loading Data

You should get something like this



# Loading Data

Now let's open the Vector Points Panel

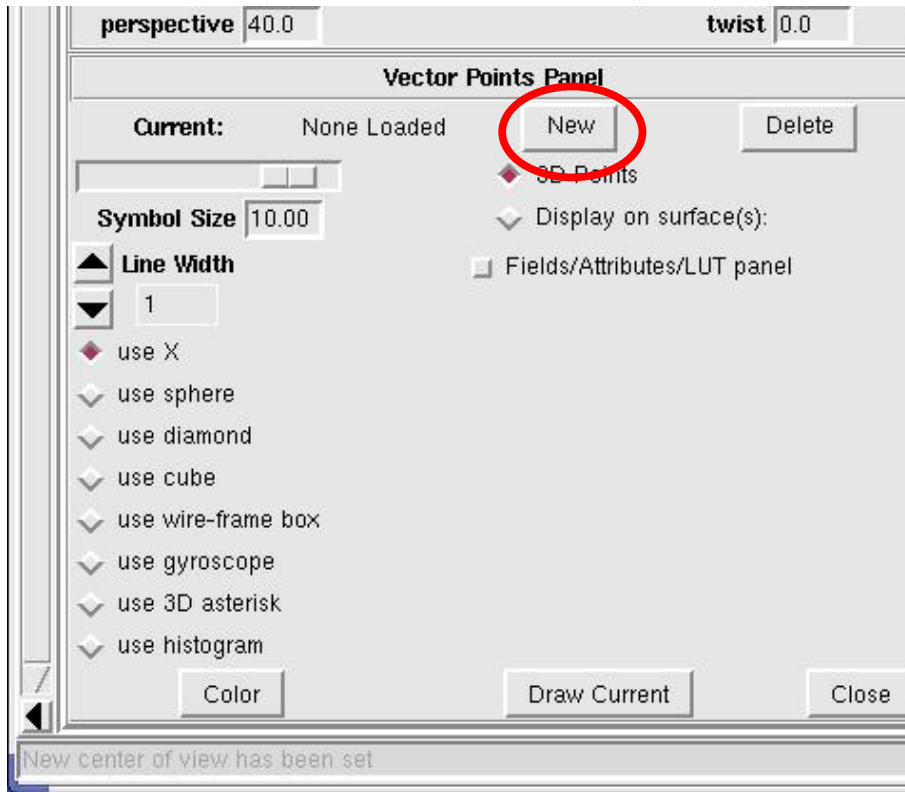


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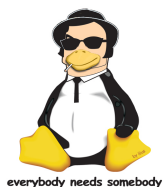
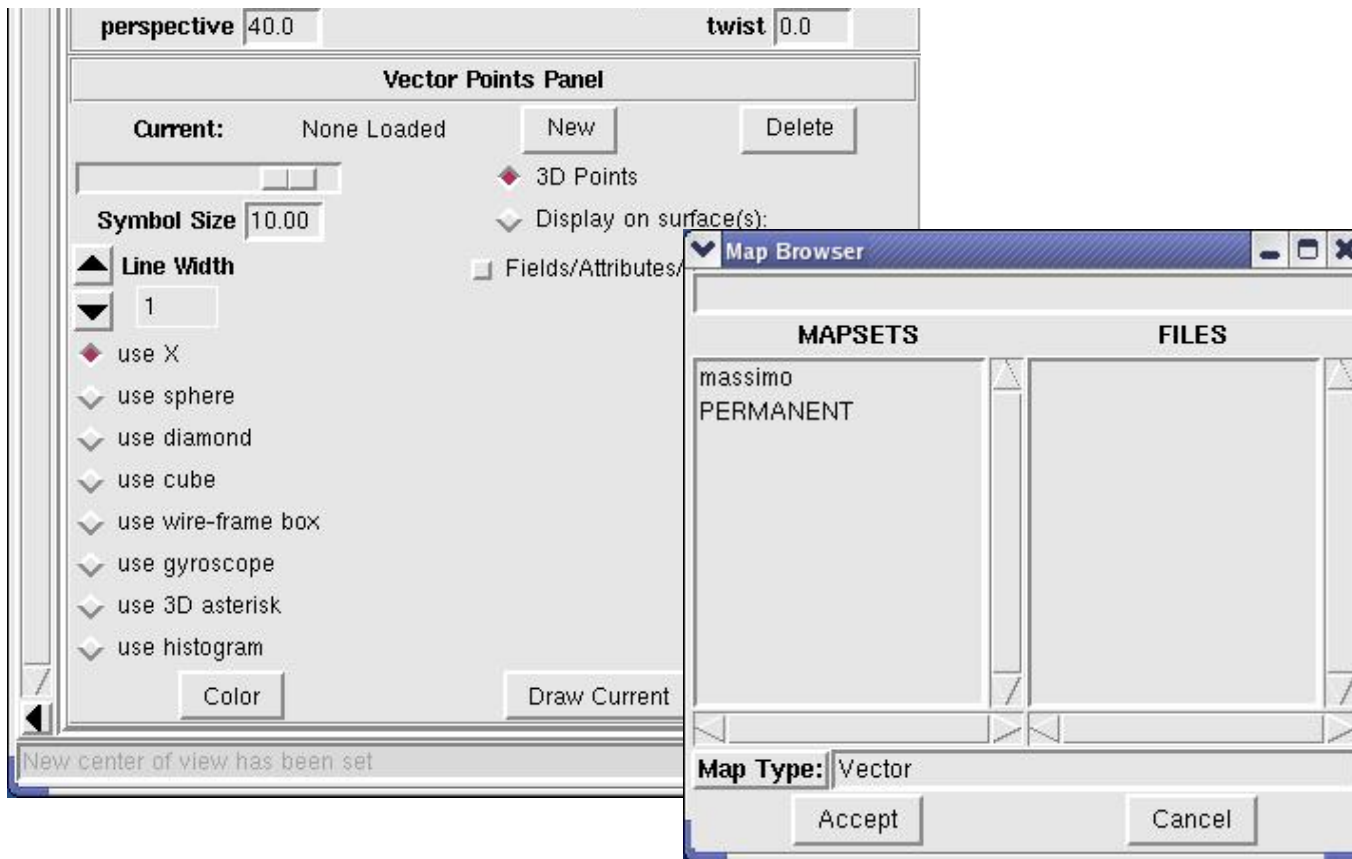


# Loading Data

Choose "New"

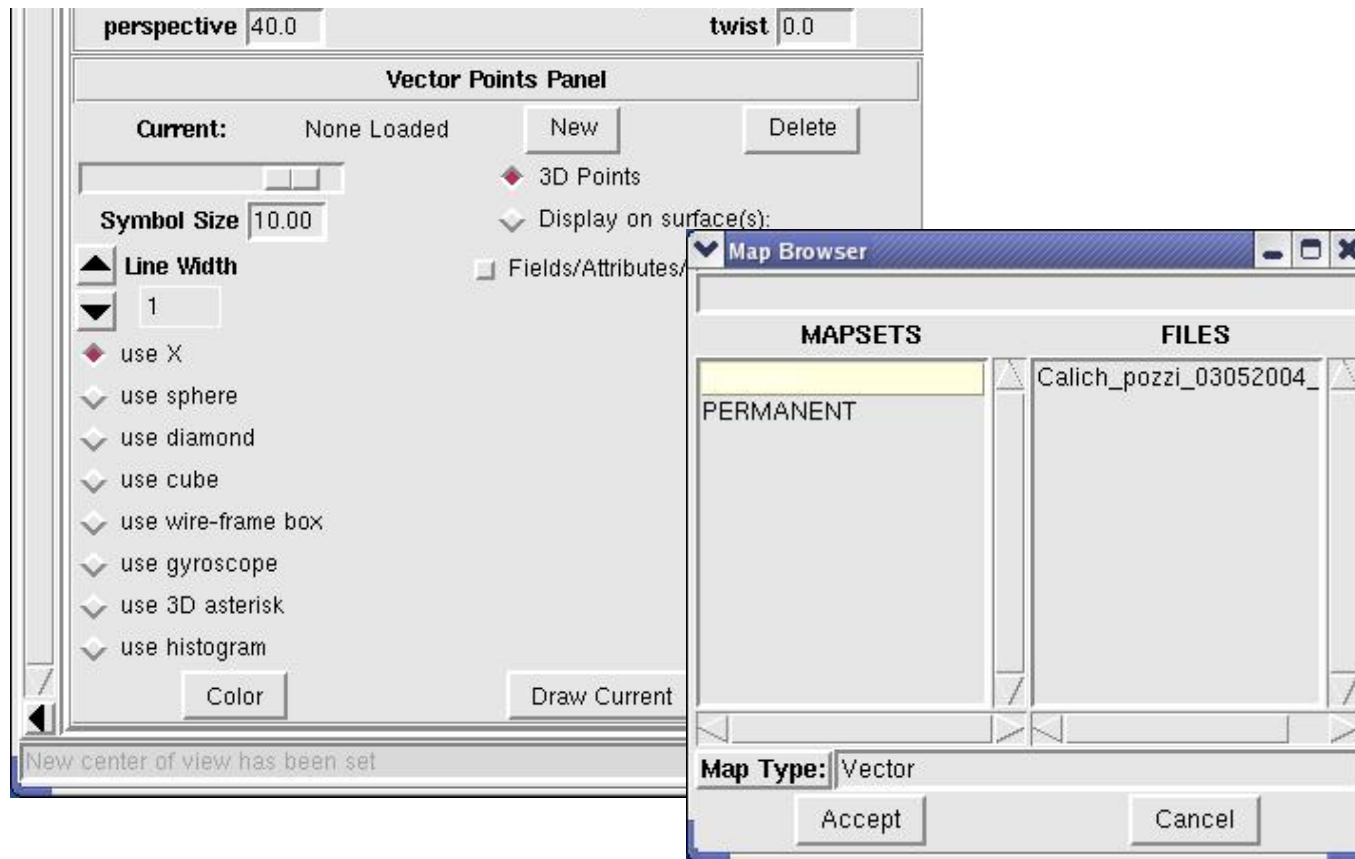


# Loading Data



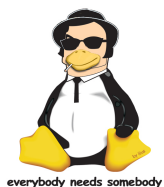
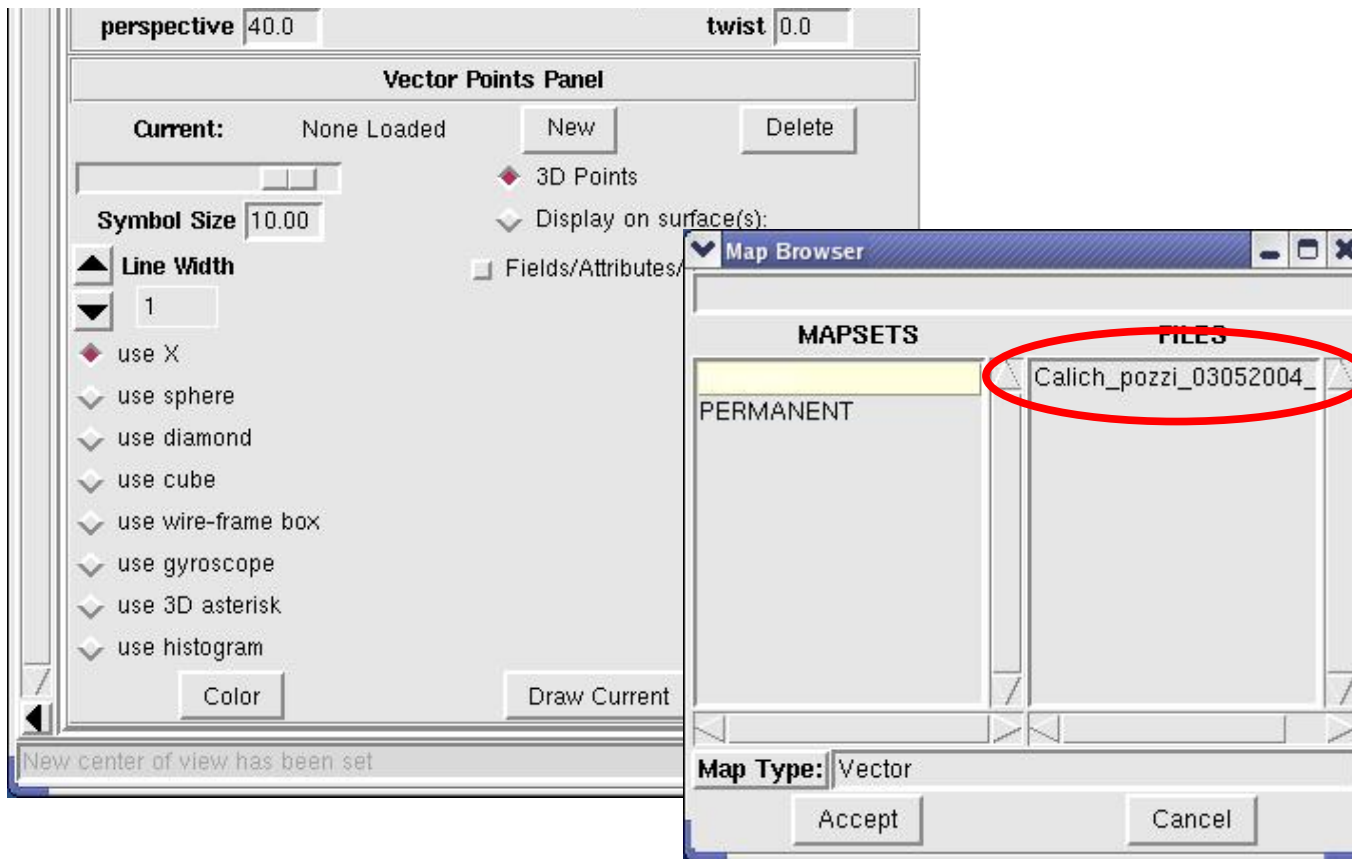
# Loading Data

...massimo...



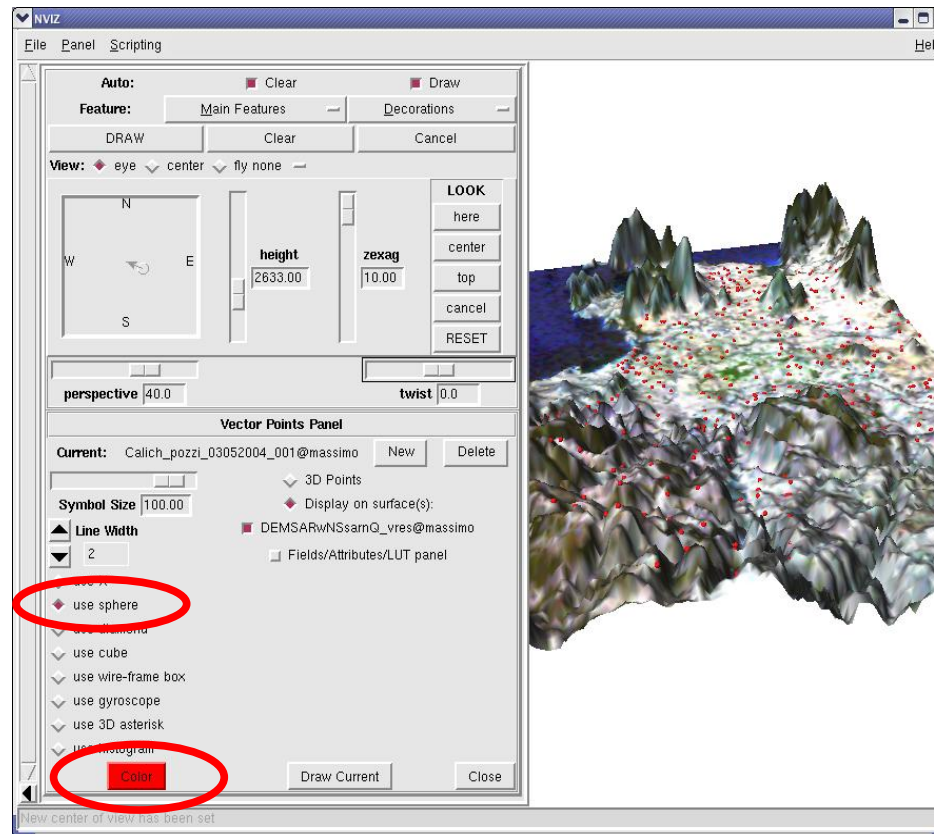
# Loading Data

...massimo... Calich... and then Accept



# Loading Data

Select "sphere" and color to red and we are done



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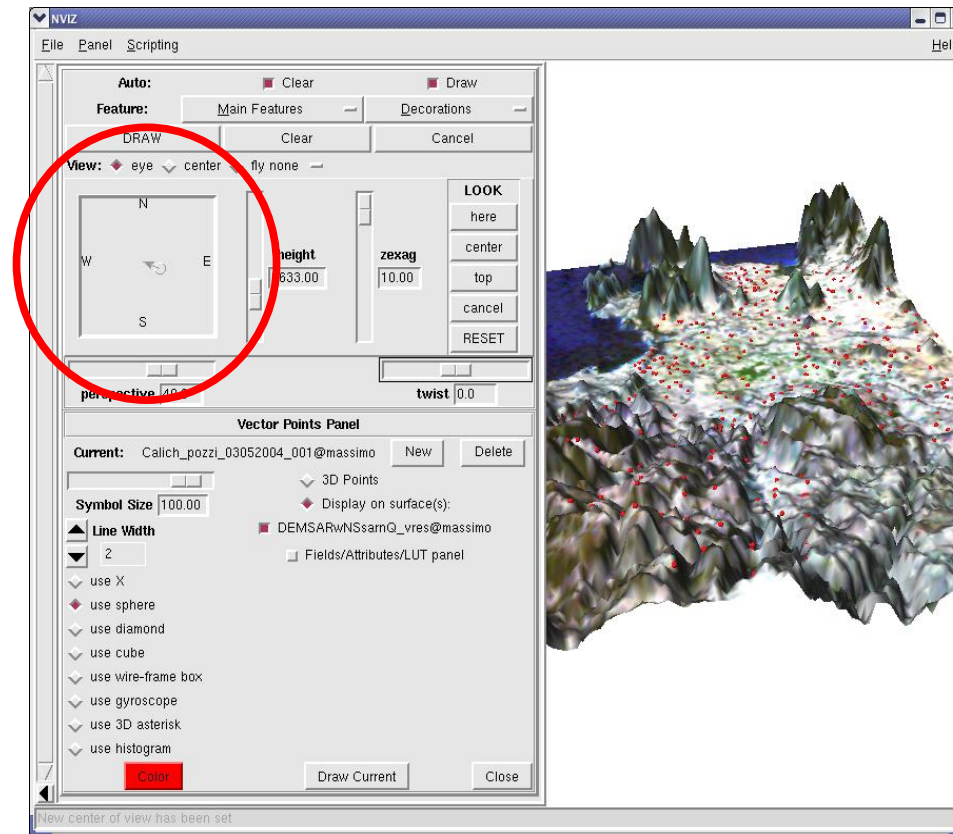


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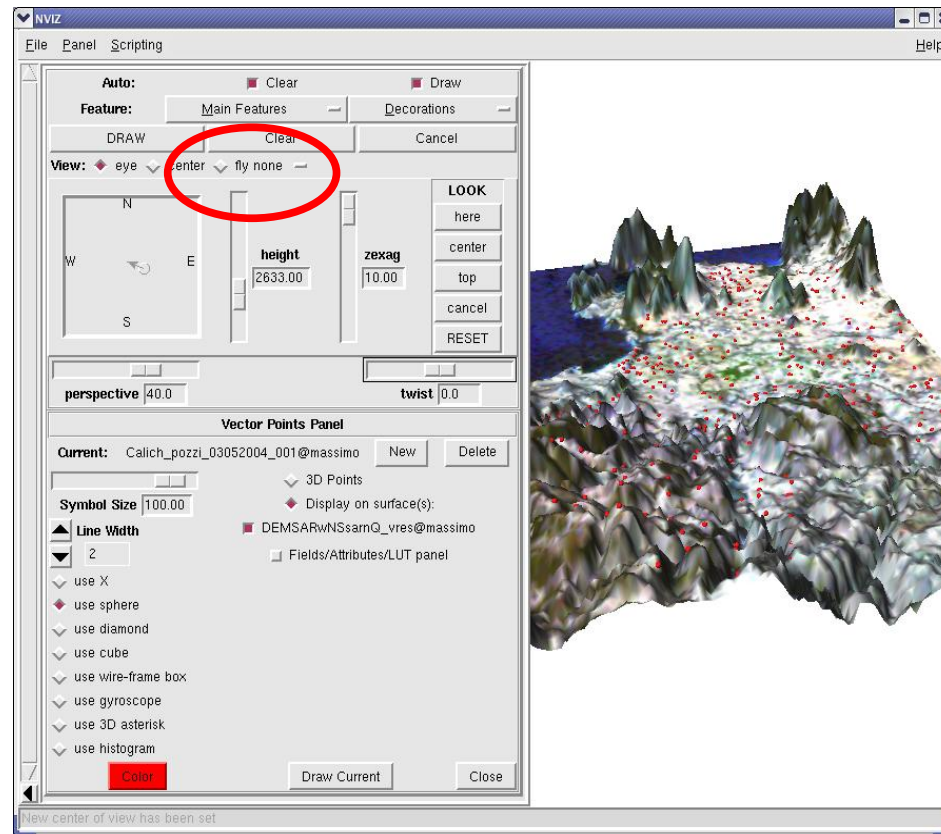
# Navigation

Have a look around with the “eye” regular navigation widget



# Navigation

Then click the fly menu

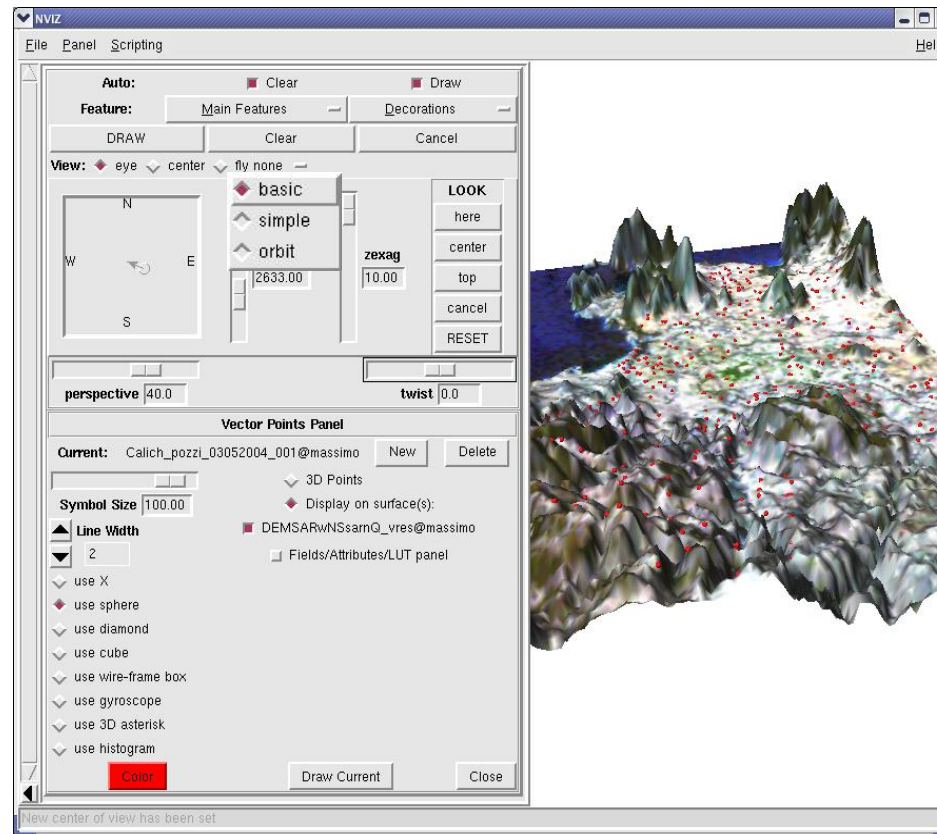


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# Navigation

Then click the fly menu and choose “basic”

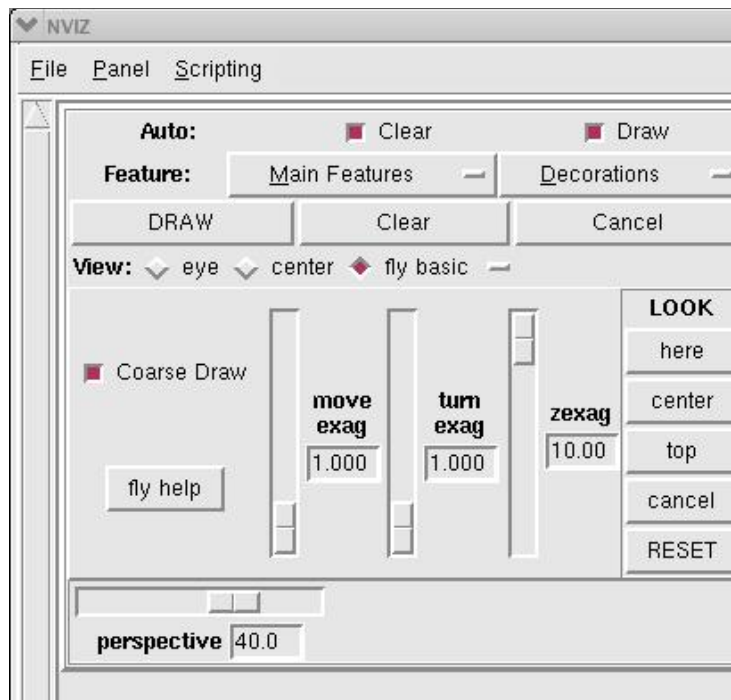


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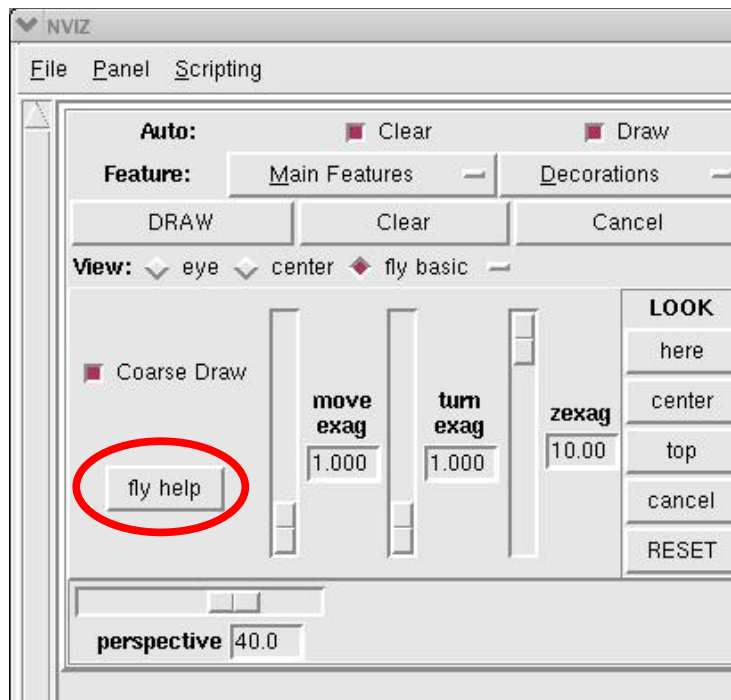
# Navigation

This is the “fly” panel



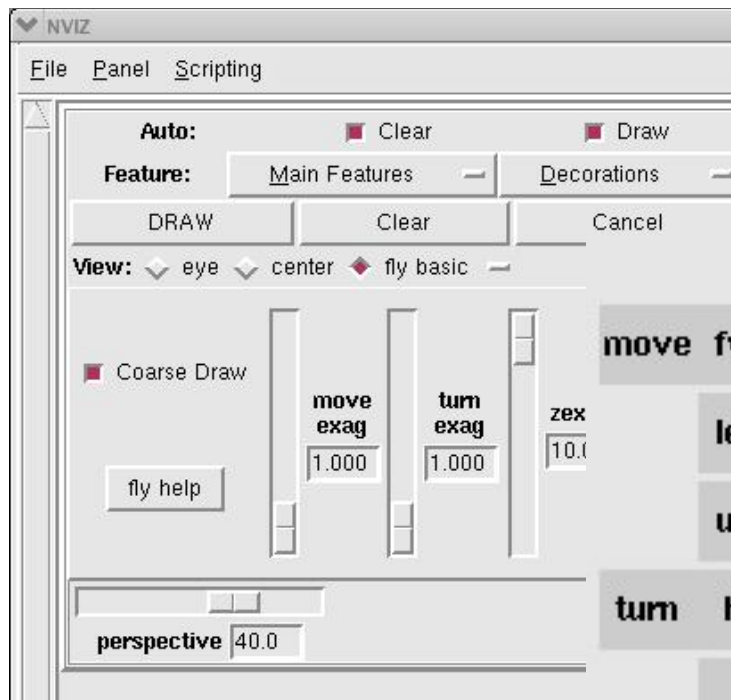
# Navigation

Before experiment with it, click on the “fly help” button

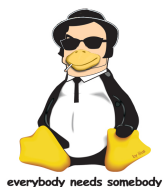


# Navigation

In order to get the help

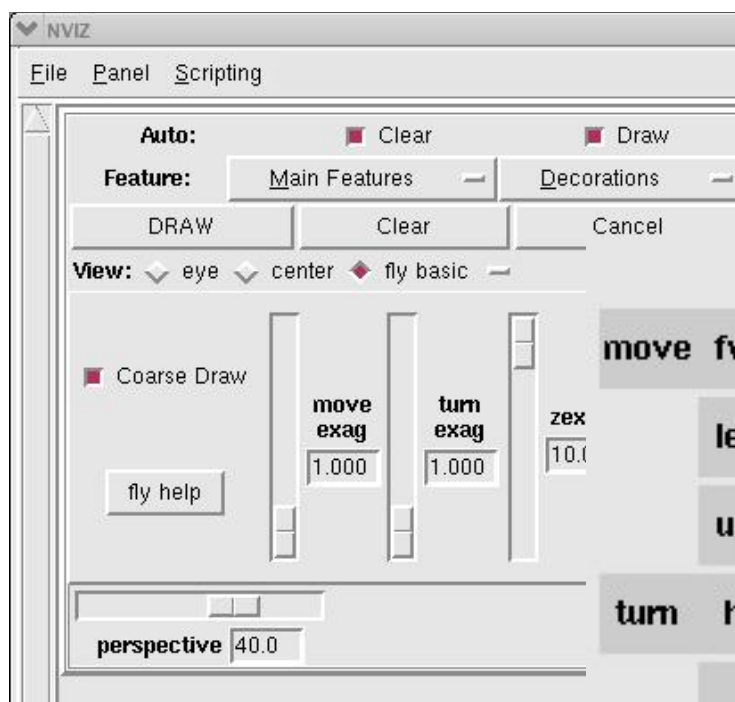


	fly	basic	simple	orbit
<b>move fwd/bkw</b>				
<b>left/right</b>				
<b>up/down</b>				
<b>turn heading</b>				
<b>pitch</b>				
<b>roll(twist)</b>				

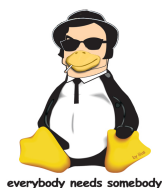


# Navigation

Experiment, if you like (you can also set to full screen)

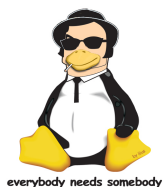


	fly	basic	simple	orbit
move fwd/bkw				
left/right				
up/down				
turn heading				
pitch				
roll(twist)				



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NVIZ: 3D Navigation and flythrough  
NVIZ: 3D vector points with multiple attributes

Different attribute value to each point  
Multiple value for each point  
Create and use Look Up Tables  
Access the related DB info

## Different attribute value

Each vector point can be drawn with a different attribute value depending from the associated DB.



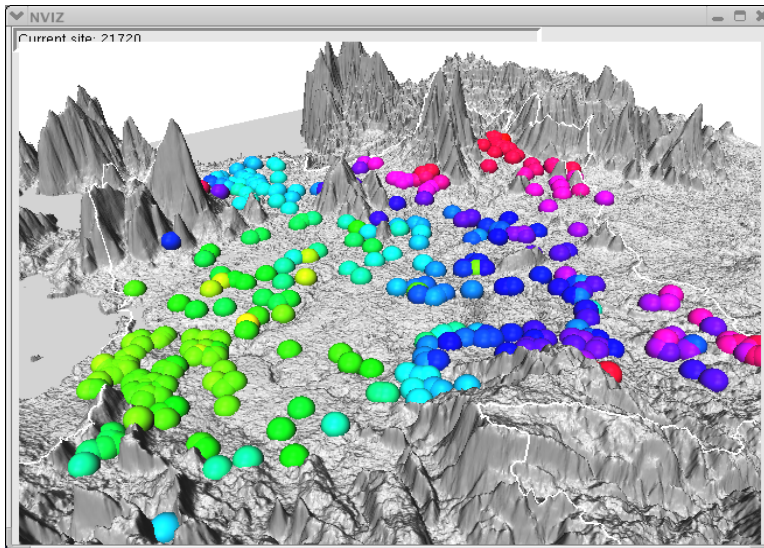
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## Different attribute value

Each vector point can be drawn with a different attribute value depending from the associated DB.

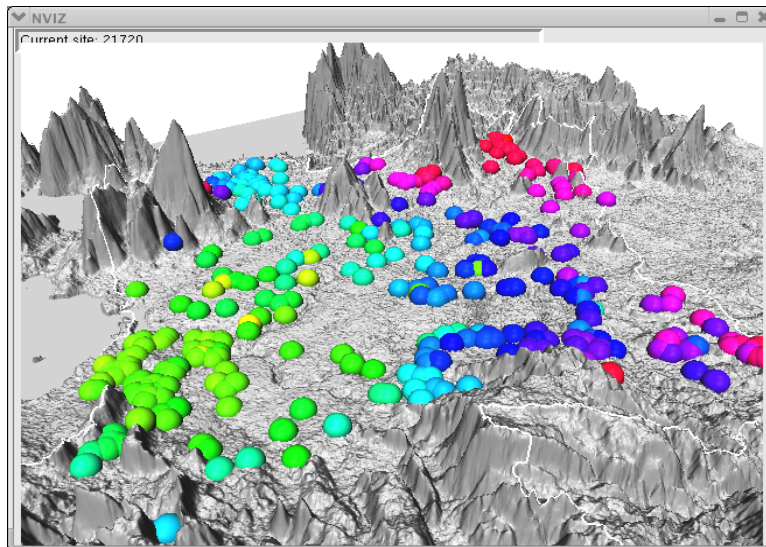
*Color*



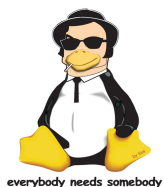
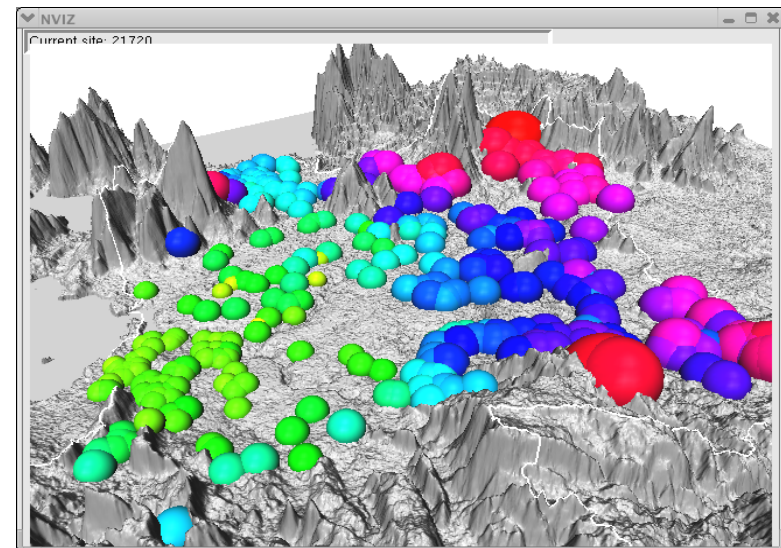
## Different attribute value

Each vector point can be drawn with a different attribute value depending from the associated DB.

*Color*



*Color + Size*

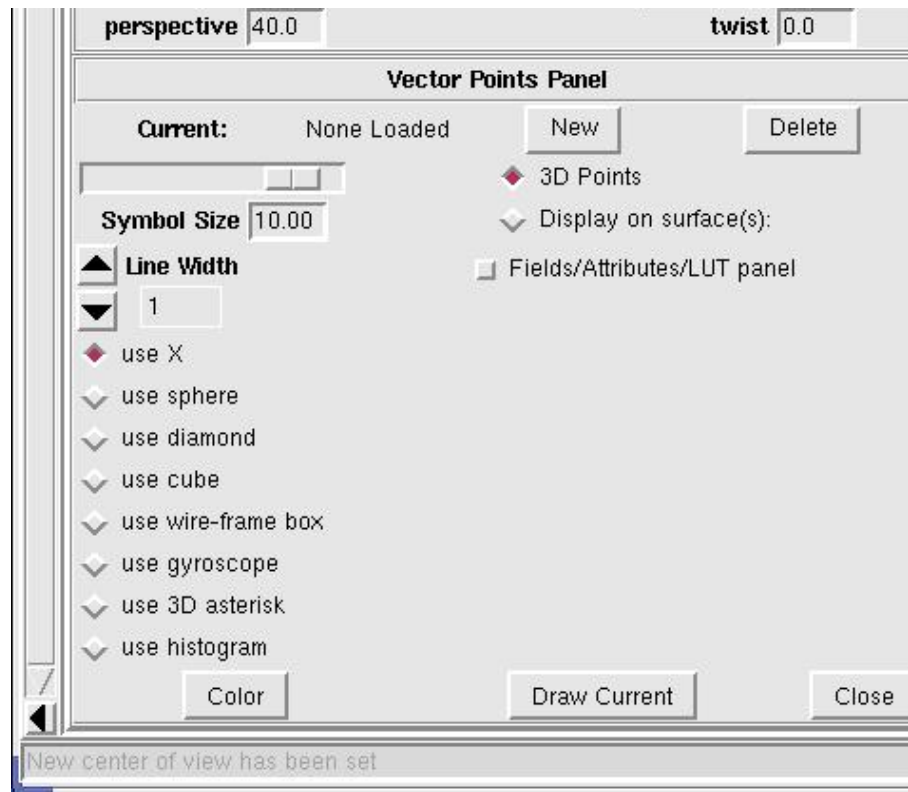


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# Different attribute value

Let's start from the "Vector Points Panel"

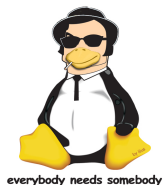
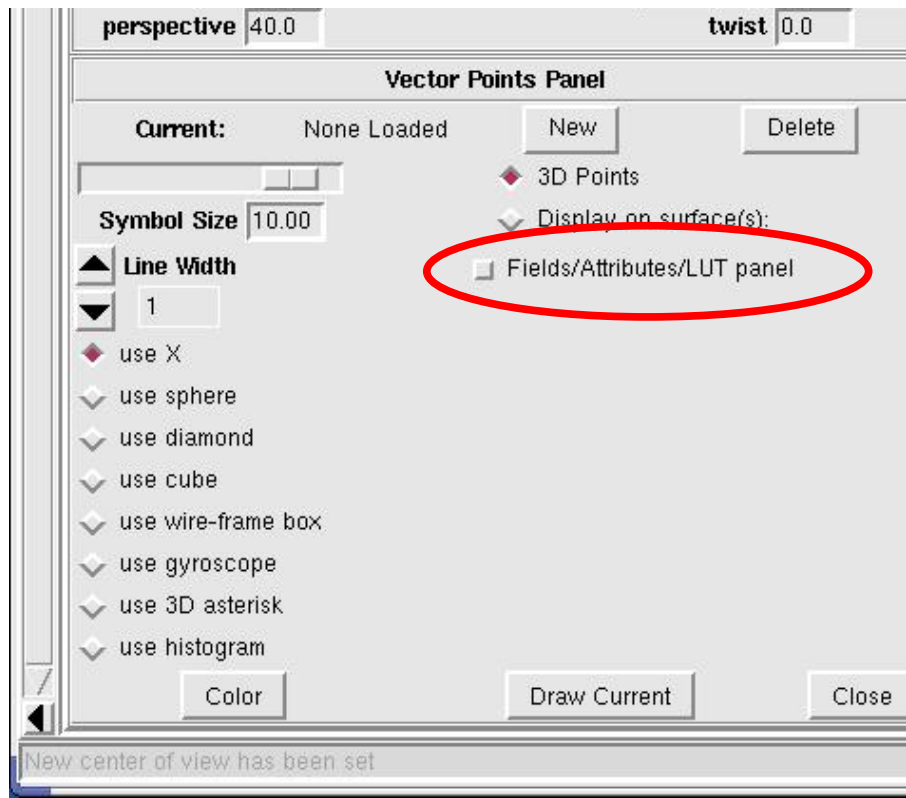


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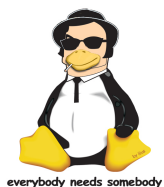
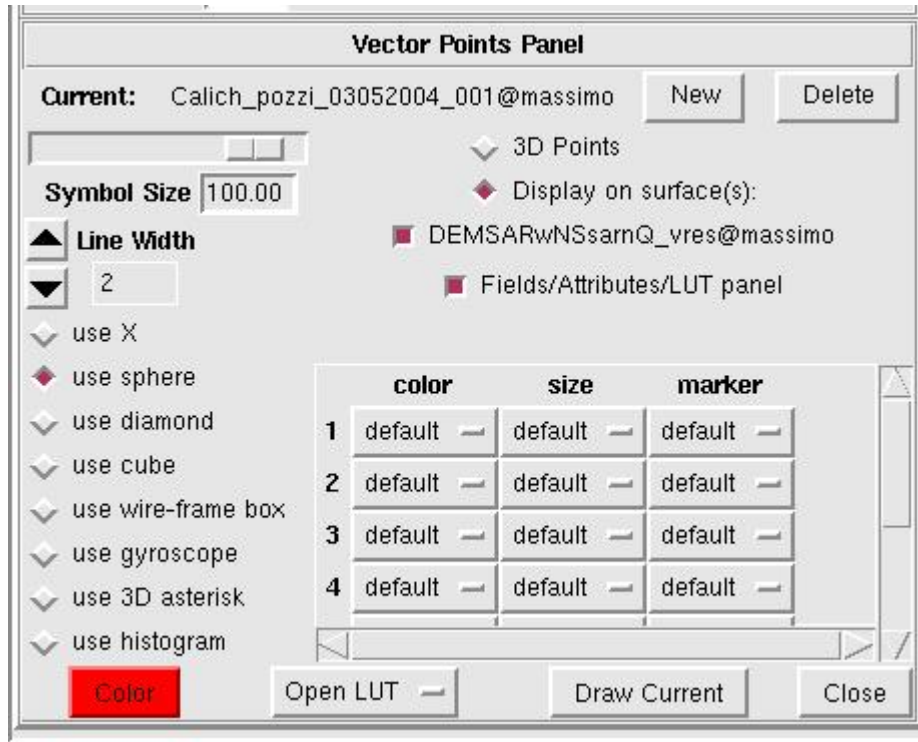
# Different attribute value

Check the Fields/Attributes/LUT panel



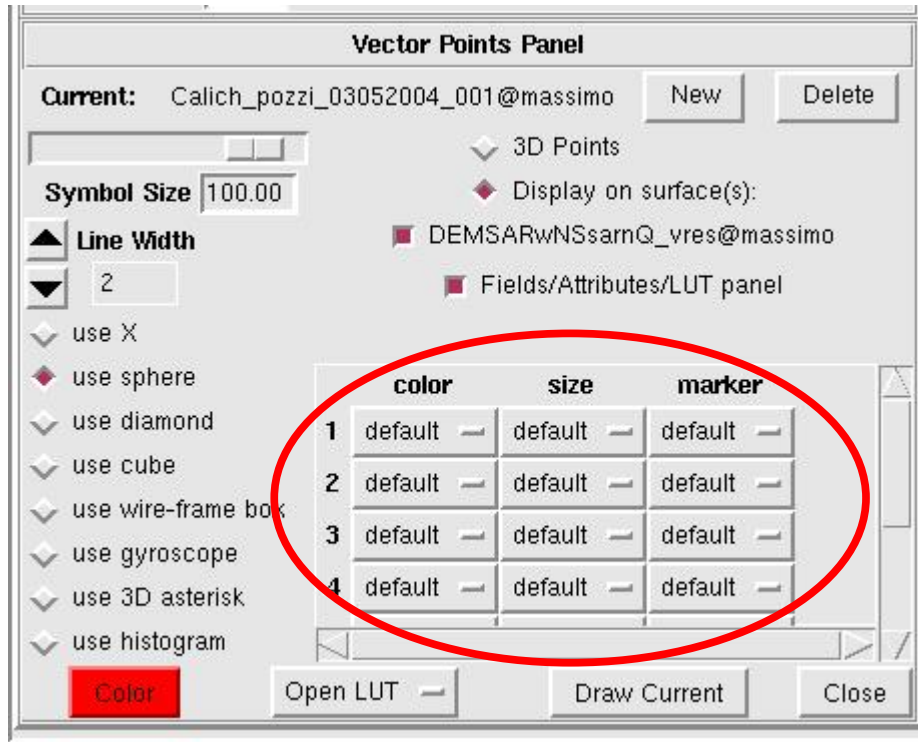
# Different attribute value

Here is the panel



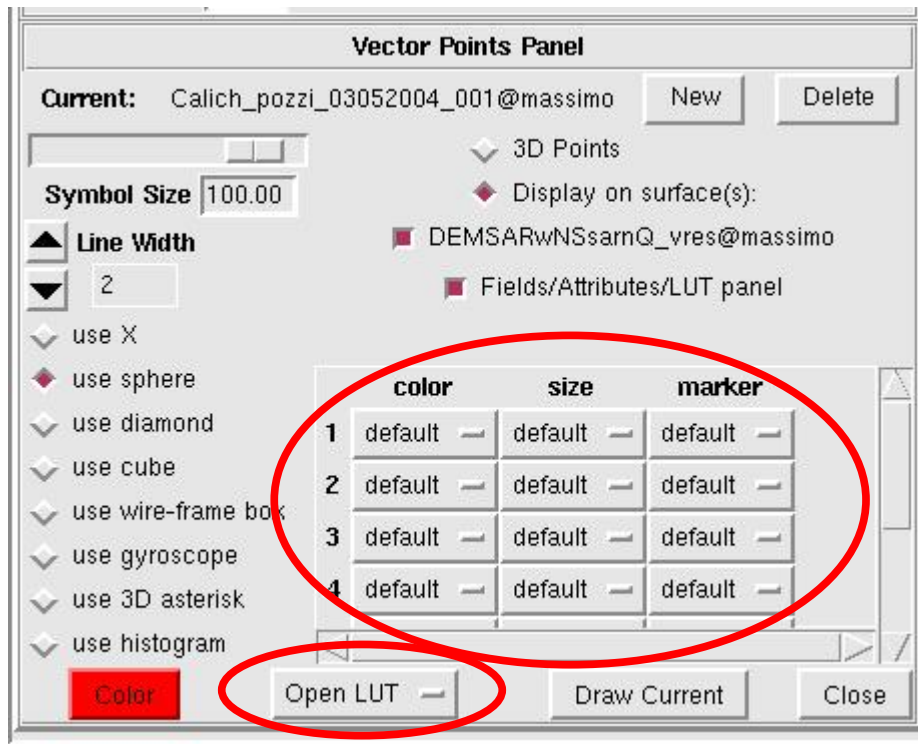
## Different attribute value

Here is the panel...



## Different attribute value

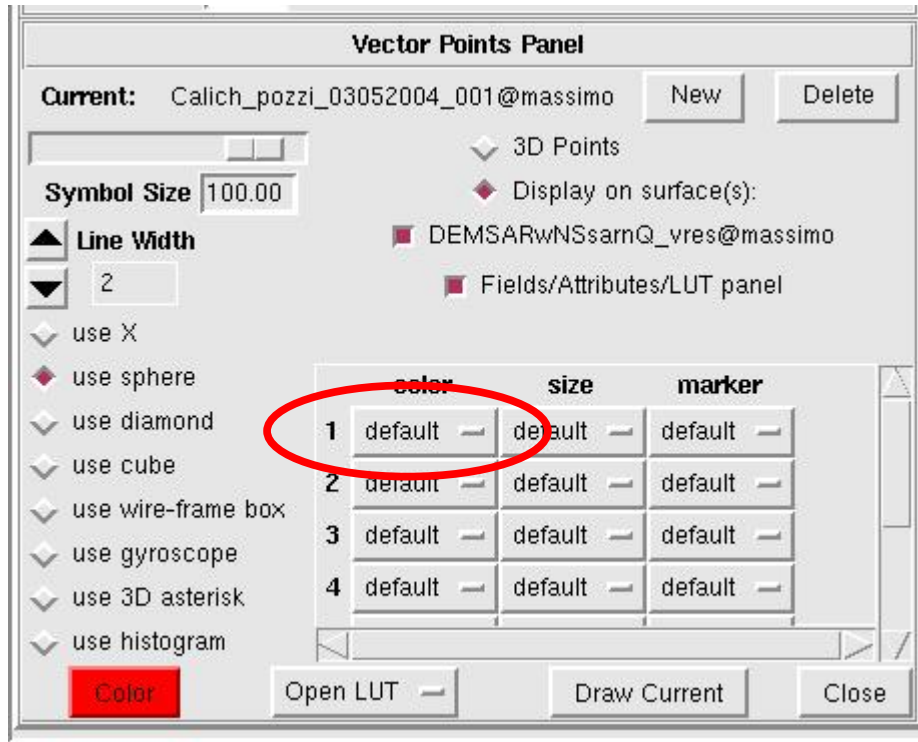
Here is the panel... and the LUT button





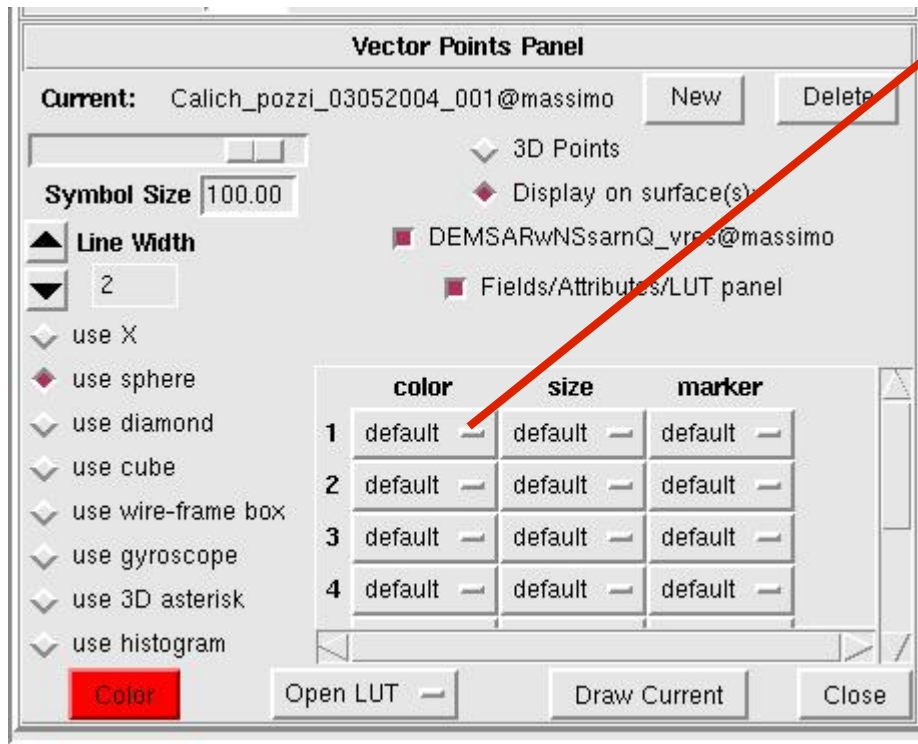
## Different attribute value

Push the color button...



# Different attribute value

Push the color button...and choose "QUOTA\_PIEZ"

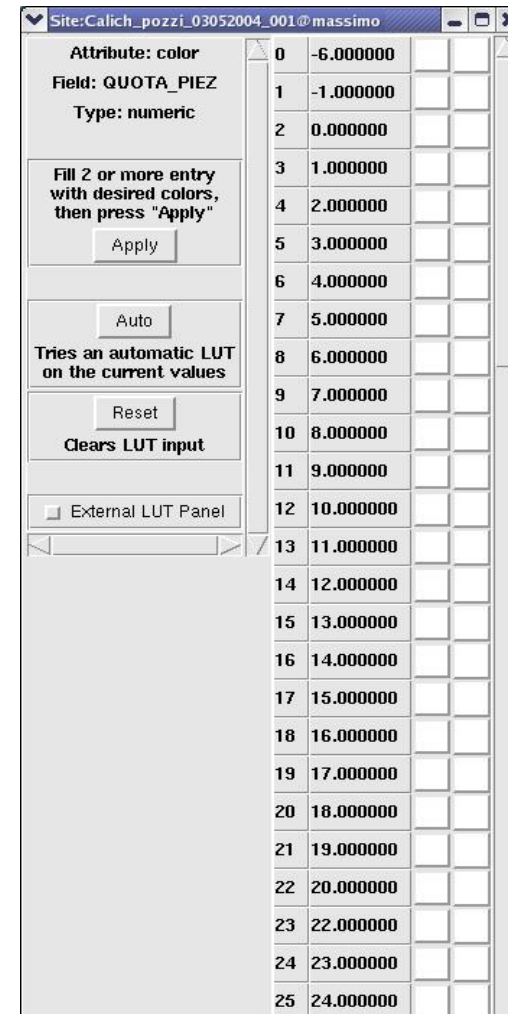


- ◇ CAT
- ◇ ID\_POZZO
- ◇ RILEVATORI
- ◇ UTM\_EST
- ◇ UTM\_NORD
- ◇ QUOTA\_P\_C\_
- ◇ SIST\_PERF
- ◇ CTR
- ◇ PROV
- ◇ COMUNE
- ◇ LOCALIT?
- ◇ PROPRIETAR
- ◇ ANNO\_COSTR
- ◇ PROF\_M\_PC
- ◇ NOTE
- ◇ H\_BP\_M
- ◇ D\_RIVESTIM
- ◇ DATI\_COSTR
- ◇ \_PROF\_FILTER
- ◇ POMPA
- ◇ Q\_L/S
- ◇ USO
- ◇ UNI\_IDROG
- ◇ DATA\_1\_CAM
- ◇ LIV\_DIN
- ◇ LIV\_PIEZ\_M
- ◇ LIV\_STAT\_M
- ◇ LIV\_DIN\_M
- ◇ QUOTA\_PIEZ
- ◇ BRELIEVO\_D
- ◇ T\_gC
- ◇ COND\_MS/CM
- ◇ PH
- ◇ default
- ◇ fixed



# Different attribute value

This window opens



# Different attribute value

Click the "Auto" button...

Attribute: color  
Field: QUOTA\_PIEZ  
Type: numeric

Fill 2 or more entry with desired colors, then press "Apply"

Apply

Auto

Then on automatic LUT on the current values

Reset  
Clears LUT input

External LUT Panel

0	-6.000000
1	-1.000000
2	0.000000
3	1.000000
4	2.000000
5	3.000000
6	4.000000
7	5.000000
8	6.000000
9	7.000000
10	8.000000
11	9.000000
12	10.000000
13	11.000000
14	12.000000
15	13.000000
16	14.000000
17	15.000000
18	16.000000
19	17.000000
20	18.000000
21	19.000000
22	20.000000
23	22.000000
24	23.000000
25	24.000000



# Different attribute value

Click the "Auto" button... and see the effect

Site: Calich\_pozzi\_03052004\_001@massimo

Attribute: color  
Field: QUOTA\_PIEZ  
Type: numeric

Fill 2 or more entry with desired colors, then press "Apply"  
Apply

Auto  
Tries an automatic LUT on the current values

Reset  
Clears LUT input

External LUT Panel

Color scale legend:  
-6.000000  
18.000000  
38.000000  
58.000000  
87.000000  
141.000000  
270.000000  
472.000000

Index	Value	Color 1	Color 2
0	-6.000000	Yellow	Yellow
1	-1.000000	Light Green	Light Green
2	0.000000	Light Green	Light Green
3	1.000000	Light Green	Light Green
4	2.000000	Light Green	Light Green
5	3.000000	Light Green	Light Green
6	4.000000	Light Green	Light Green
7	5.000000	Light Green	Light Green
8	6.000000	Light Green	Light Green
9	7.000000	Light Green	Light Green
10	8.000000	Light Green	Light Green
11	9.000000	Light Green	Light Green
12	10.000000	Light Green	Light Green
13	11.000000	Light Green	Light Green
14	12.000000	Light Green	Light Green
15	13.000000	Light Green	Light Green
16	14.000000	Light Green	Light Green
17	15.000000	Light Green	Light Green
18	16.000000	Light Green	Light Green
19	17.000000	Light Green	Light Green
20	18.000000	Light Green	Light Green
21	19.000000	Light Green	Light Green
22	20.000000	Light Green	Light Green
23	22.000000	Light Green	Light Green
24	23.000000	Light Green	Light Green
25	24.000000	Light Green	Light Green

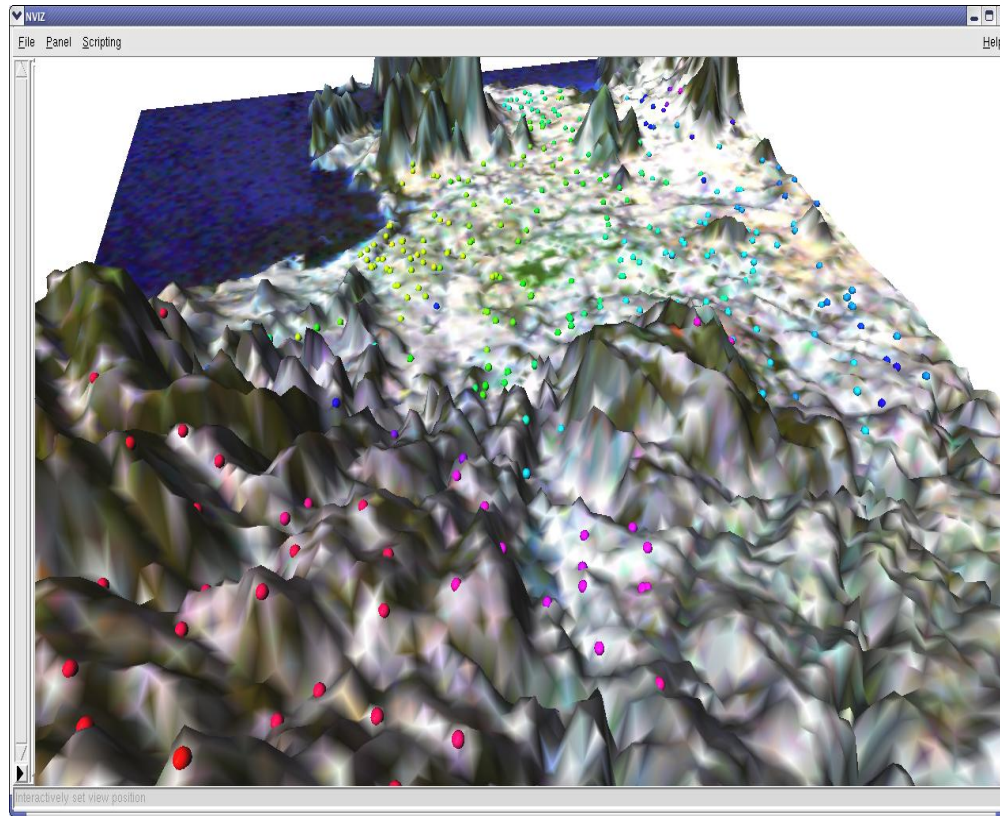


NVIZ: 3D Navigation and flythrough  
NVIZ: 3D vector points with multiple attributes

Different attribute value to each point  
Multiple value for each point  
Create and use Look Up Tables  
Access the related DB info

## Different attribute value

Click the "Auto" button... and see the effect



The screenshot shows the NVIZ Look Up Table (LUT) panel. The title bar reads 'Site:Calich\_pozzi\_03052004\_001@massimo'. The panel contains the following information:

- Attribute: color
- Field: QUOTA\_PIEZ
- Type: numeric
- Buttons: 'Apply', 'Auto', 'Reset'
- Text: 'Fill 2 or more entry with desired colors, then press "Apply"', 'Tries an automatic LUT on the current values', 'Clears LUT input'
- Checkbox: 'External LUT Panel' (unchecked)
- Color scale legend with values: -6.000000, -18.000000, -38.000000, -58.000000, -87.000000, -141.000000, -270.000000, -472.000000
- Table with 26 rows (0-25) and 2 columns (Value, Color)

Index	Value	Color
0	-6.000000	Yellow
1	-1.000000	Light Green
2	0.000000	Light Green
3	1.000000	Light Green
4	2.000000	Light Green
5	3.000000	Light Green
6	4.000000	Light Green
7	5.000000	Light Green
8	6.000000	Light Green
9	7.000000	Light Green
10	8.000000	Light Green
11	9.000000	Light Green
12	10.000000	Light Green
13	11.000000	Light Green
14	12.000000	Light Green
15	13.000000	Light Green
16	14.000000	Light Green
17	15.000000	Light Green
18	16.000000	Light Green
19	17.000000	Light Green
20	18.000000	Light Green
21	19.000000	Light Green
22	20.000000	Light Green
23	22.000000	Light Green
24	23.000000	Light Green
25	24.000000	Light Green



# Different attribute value

Now click on the "Reset" button

Site: Calich\_pozzi\_03052004\_001@massimo

Attribute: color  
Field: QUOTA\_PIEZ  
Type: numeric

Fill 2 or more entry with desired colors, then press "Apply"  
Apply

Auto  
Tries an automatic LUT on the current values  
Reset

External LUT Panel

0	-6.000000	Yellow	Yellow
1	-1.000000	Light Green	Light Green
2	0.000000	Light Green	Light Green
3	1.000000	Light Green	Light Green
4	2.000000	Light Green	Light Green
5	3.000000	Light Green	Light Green
6	4.000000	Light Green	Light Green
7	5.000000	Light Green	Light Green
8	6.000000	Light Green	Light Green
9	7.000000	Light Green	Light Green
10	8.000000	Light Green	Light Green
11	9.000000	Light Green	Light Green
12	10.000000	Light Green	Light Green
13	11.000000	Light Green	Light Green
14	12.000000	Light Green	Light Green
15	13.000000	Light Green	Light Green
16	14.000000	Light Green	Light Green
17	15.000000	Light Green	Light Green
18	16.000000	Light Green	Light Green
19	17.000000	Light Green	Light Green
20	18.000000	Light Green	Light Green
21	19.000000	Light Green	Light Green
22	20.000000	Light Green	Light Green
23	22.000000	Light Green	Light Green
24	23.000000	Light Green	Light Green
25	24.000000	Light Green	Light Green



# Different attribute value

And let's build our LUT clicking on a color

Attribute: color  
Field: QUOTA\_PIEZ  
Type: numeric

Fill 2 or more entry with desired colors, then press "Apply"

Apply

Auto

Tries an automatic LUT on the current values

Reset

Clears LUT input

External LUT Panel

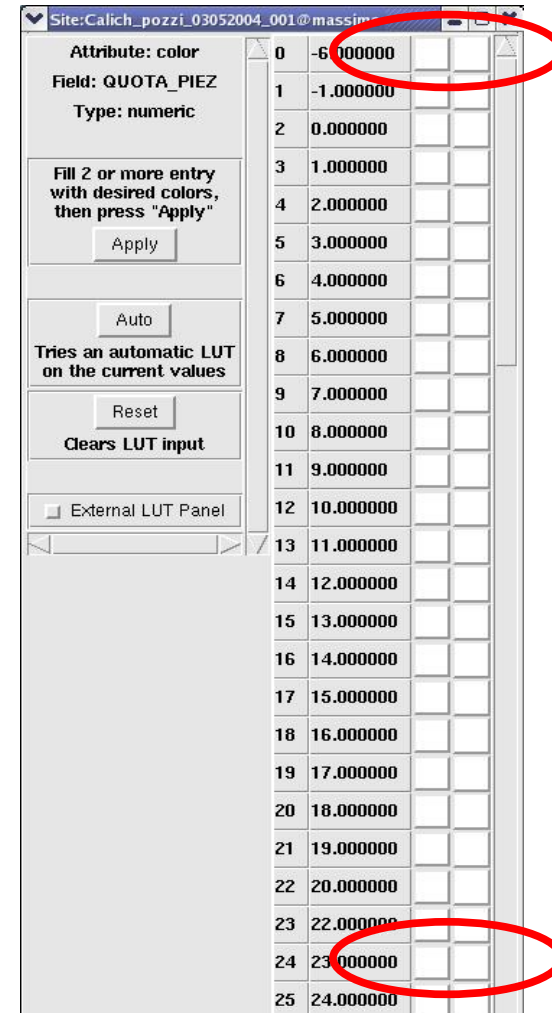
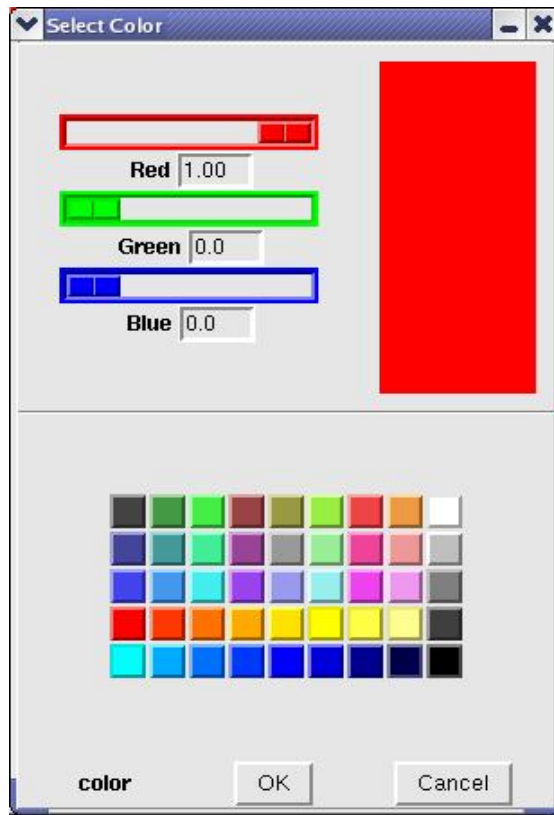
0	-6.000000	
1	-1.000000	
2	0.000000	
3	1.000000	
4	2.000000	
5	3.000000	
6	4.000000	
7	5.000000	
8	6.000000	
9	7.000000	
10	8.000000	
11	9.000000	
12	10.000000	
13	11.000000	
14	12.000000	
15	13.000000	
16	14.000000	
17	15.000000	
18	16.000000	
19	17.000000	
20	18.000000	
21	19.000000	
22	20.000000	
23	22.000000	
24	23.000000	
25	24.000000	





# Different attribute value

Choose red and yellow



# Different attribute value

Choose red and yellow...

Index	Value	Color
0	-6.000000	Red
1	-1.000000	
2	0.000000	
3	1.000000	
4	2.000000	
5	3.000000	
6	4.000000	
7	5.000000	
8	6.000000	
9	7.000000	
10	8.000000	
11	9.000000	
12	10.000000	
13	11.000000	
14	12.000000	
15	13.000000	
16	14.000000	
17	15.000000	
18	16.000000	
19	17.000000	
20	18.000000	
21	19.000000	
22	20.000000	
23	22.000000	
24	23.000000	Yellow



## Different attribute value

Choose red and yellow... and click the "Apply" button

Attribute: color  
Field: QUOTA\_PIEZ  
Type: numeric

Fill 2 or more entry with desired colors, then press "Apply"

Apply

Auto  
Tries an automatic LUT on the current values

Reset  
Clears LUT input

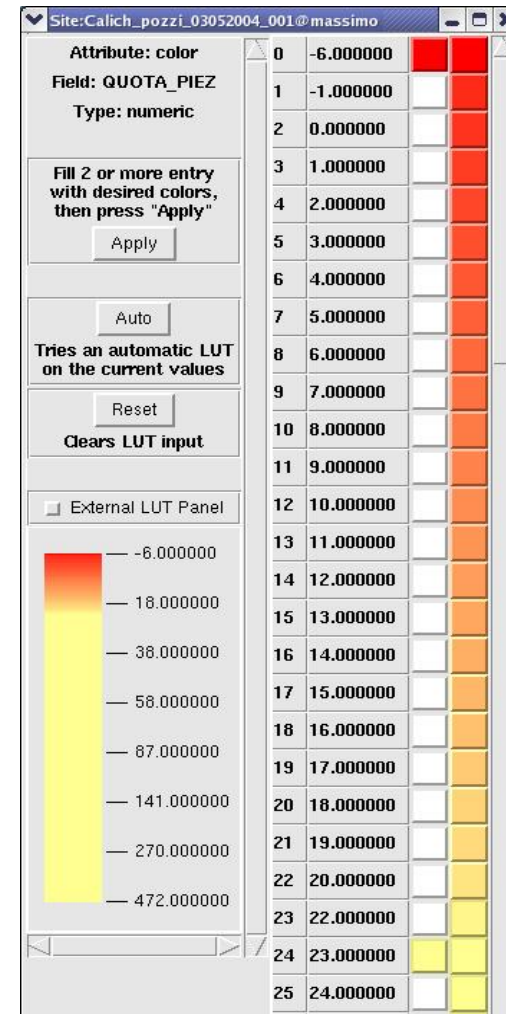
External LUT Panel

0	-6.000000	Red
1	-1.000000	
2	0.000000	
3	1.000000	
4	2.000000	
5	3.000000	
6	4.000000	
7	5.000000	
8	6.000000	
9	7.000000	
10	8.000000	
11	9.000000	
12	10.000000	
13	11.000000	
14	12.000000	
15	13.000000	
16	14.000000	
17	15.000000	
18	16.000000	
19	17.000000	
20	18.000000	
21	19.000000	
22	20.000000	
23	22.000000	
24	23.000000	Yellow



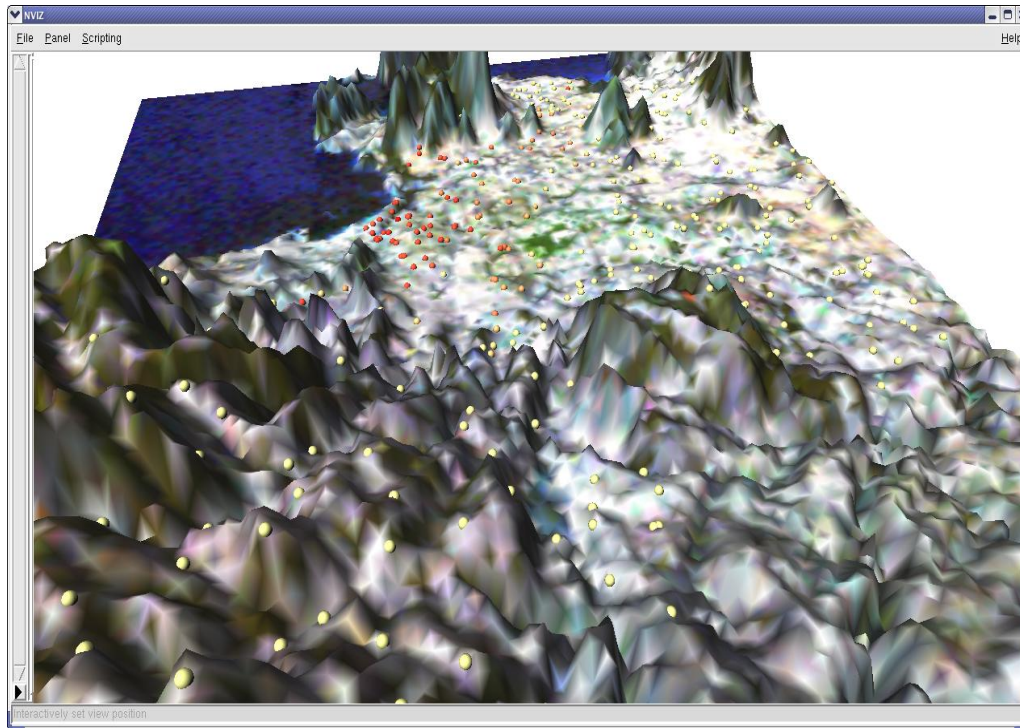
# Different attribute value

This is the result



# Different attribute value

The LUT is made by piecewise linear interpolation between each couple of input values



The screenshot shows the LUT panel in NVIZ. It is titled 'Site:Calich\_pozzi\_03052004\_001@massimo'. The panel contains the following information:

- Attribute: color
- Field: QUOTA\_PIEZ
- Type: numeric

Below this information is a table with 26 rows (0 to 25) and 2 columns. The first column contains numerical values, and the second column contains color swatches. The colors transition from red at the top to yellow at the bottom.

Index	Value	Color
0	-6.000000	Red
1	-1.000000	Red
2	0.000000	Red
3	1.000000	Red
4	2.000000	Red
5	3.000000	Red
6	4.000000	Red
7	5.000000	Red
8	6.000000	Red
9	7.000000	Red
10	8.000000	Red
11	9.000000	Red
12	10.000000	Red
13	11.000000	Red
14	12.000000	Red
15	13.000000	Red
16	14.000000	Red
17	15.000000	Red
18	16.000000	Red
19	17.000000	Red
20	18.000000	Red
21	19.000000	Red
22	20.000000	Red
23	22.000000	Red
24	23.000000	Yellow
25	24.000000	Yellow

Below the table is a vertical color gradient bar with labels: -6.000000, -18.000000, -38.000000, -58.000000, -87.000000, -141.000000, -270.000000, -472.000000.

Buttons and options include: 'Apply', 'Auto' (Tries an automatic LUT on the current values), 'Reset' (Clears LUT input), and a checkbox for 'External LUT Panel'.



NVIZ: 3D Navigation and flythrough  
NVIZ: 3D vector points with multiple attributes

Different attribute value to each point  
Multiple value for each point  
Create and use Look Up Tables  
Access the related DB info

## Different attribute value

The same can be done with the *size* of each point



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## Different attribute value

The same can be done with the *size* of each point

Attribute: size	
0	-6.000000
1	-1.000000
2	0.000000
3	1.000000
4	2.000000
5	3.000000
6	4.000000
7	5.000000
8	6.000000
9	7.000000
10	8.000000
11	9.000000
12	10.000000
13	11.000000
14	12.000000
15	13.000000
16	14.000000
17	15.000000
18	16.000000
19	17.000000



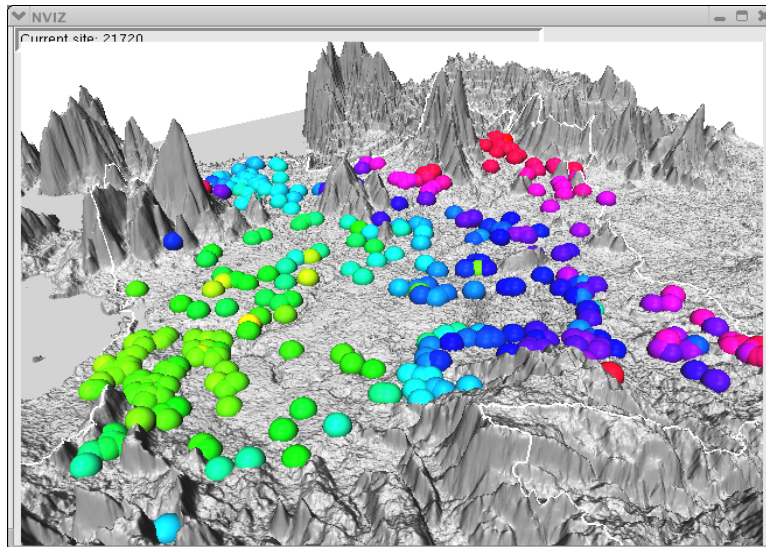
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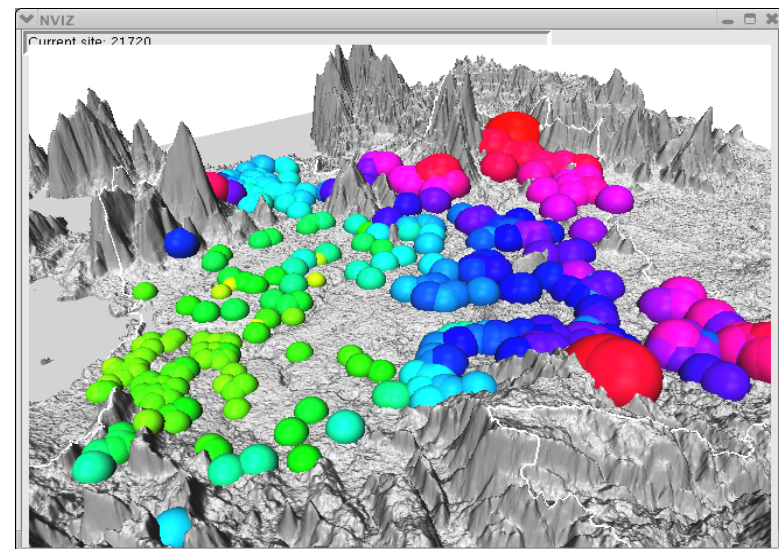
# Different attribute value

And here are some results

*Color*



*Color + Size*



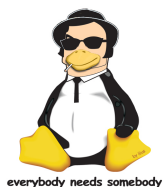
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# TOC

- NVIZ: 3D navigation and flythroughs
  - Loading data
  - Navigation
- **NVIZ: working with 3D vector points with multiple attributes**
  - Different attribute value to each point
  - **Multiple value for each point**
  - Create and use Look Up Tables
  - Access the related DB info



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## Multiple Value

Both color and size can be chosen to associate values to points and markers can be different in order to visualize more than one variable at the same time.



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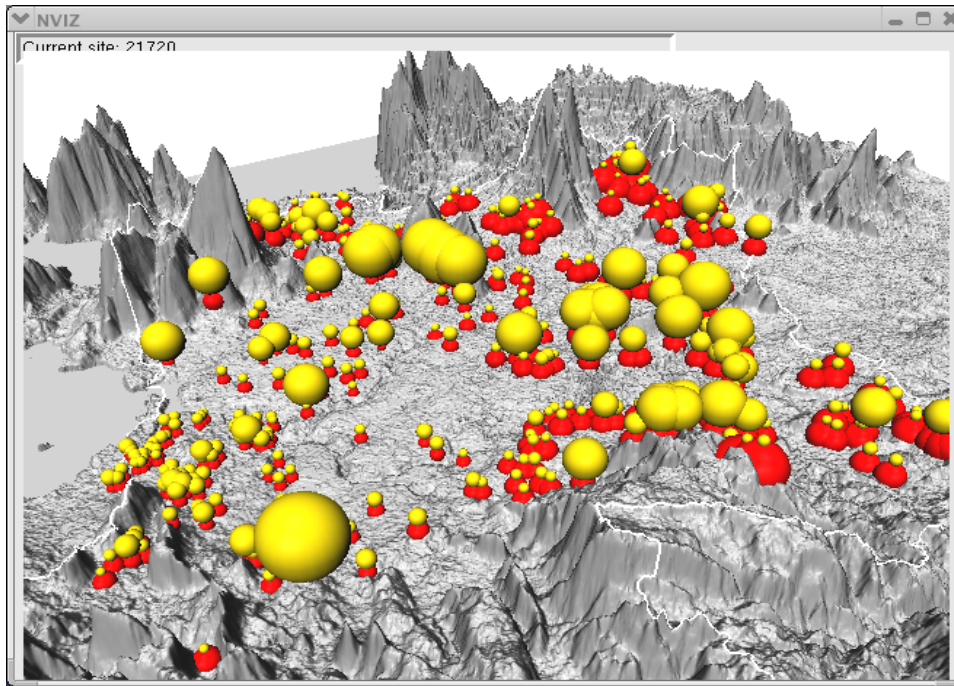
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NVIZ: 3D Navigation and flythrough  
NVIZ: 3D vector points with multiple attributes

Different attribute value to each point  
Multiple value for each point  
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Access the related DB info

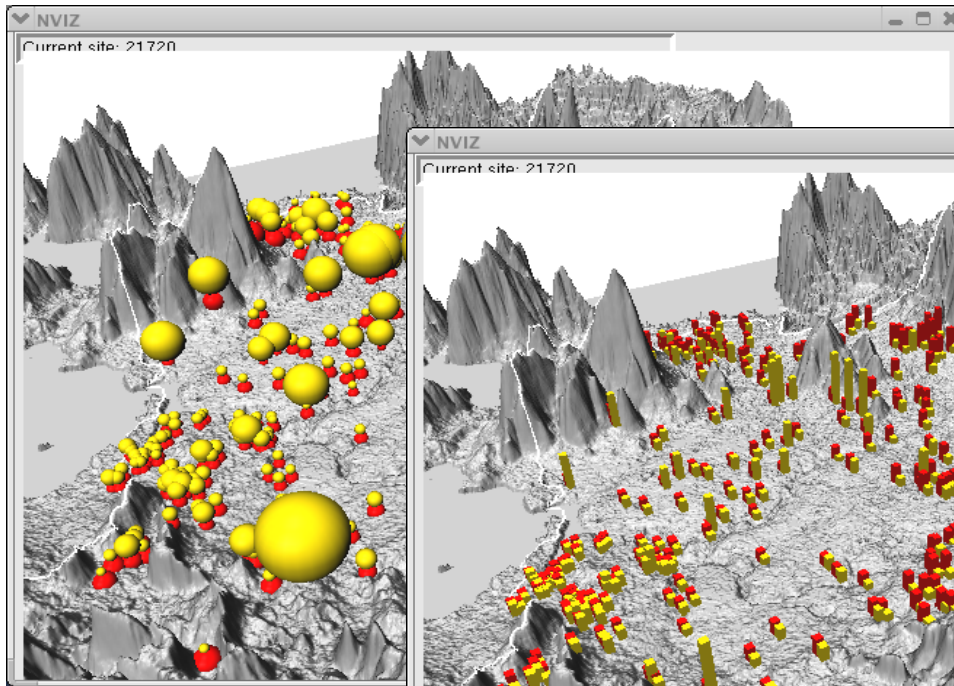
## Multiple Value

2 vars / fixed color / variable size / spherical marker

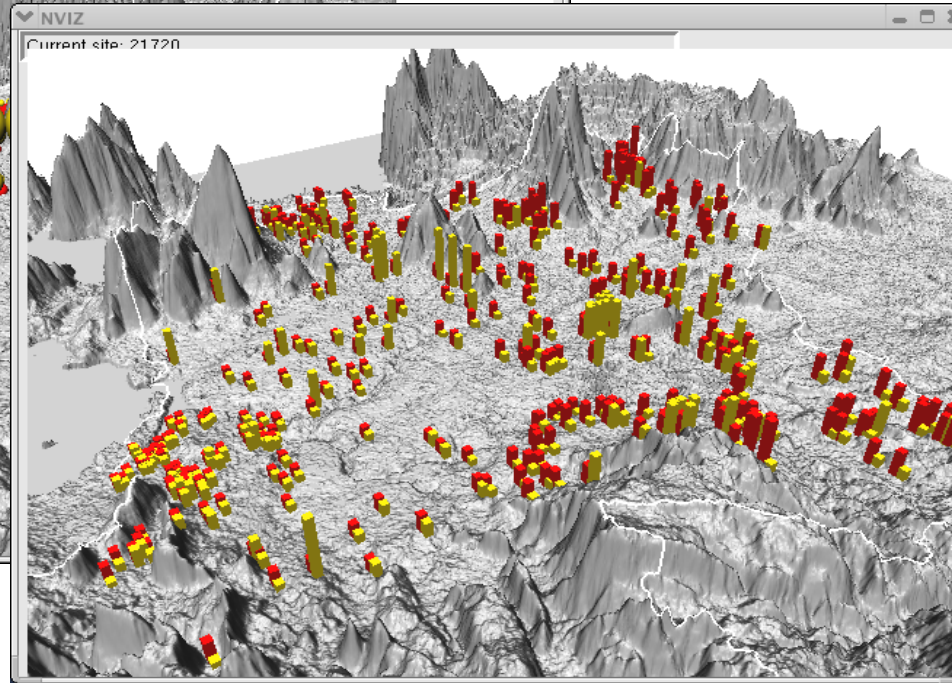


# Multiple Value

2 vars / fixed color / variable size / spherical marker

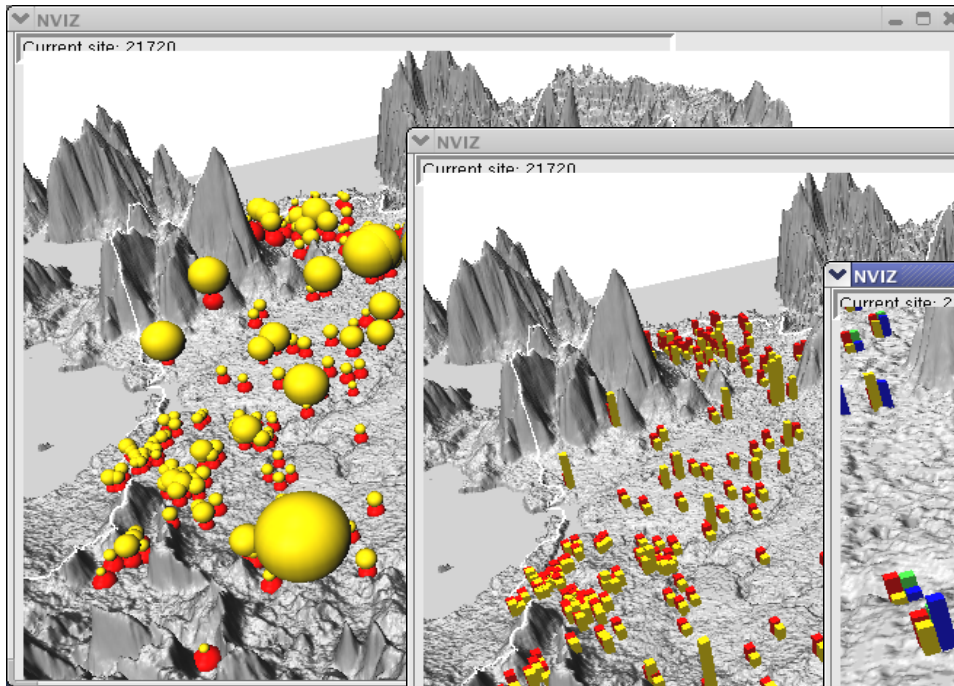


Same, but with  
histogram marker

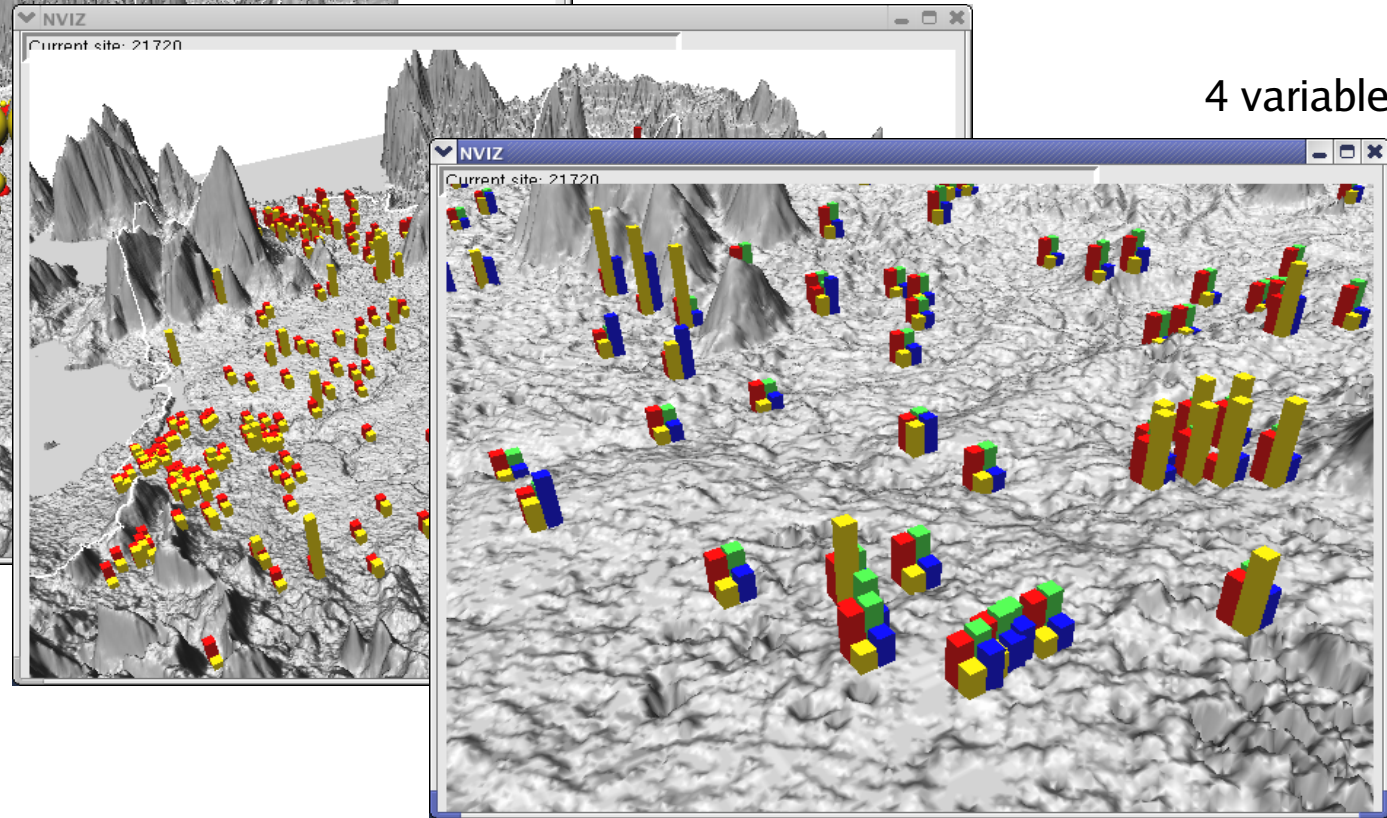


# Multiple Value

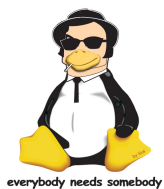
2 vars / fixed color / variable size / spherical marker



Same, but with  
histogram marker

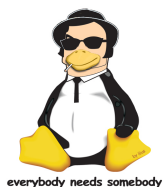


4 variables



# TOC

- NVIZ: 3D navigation and flythroughs
  - Loading data
  - Navigation
- **NVIZ: working with 3D vector points with multiple attributes**
  - Different attribute value to each point
  - Multiple value for each point
  - **Create and use Look Up Tables**
  - Access the related DB info



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## Look Up Table

It is possible to create and modify Look Up Tables using more vector points files so to visualize series with the same LUT and identify the significant modifications.



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# Look Up Table

Let's go back to our color panel

Site: Calich\_pozzi\_03052004\_001@massimo

Attribute: color  
Field: QUOTA\_PIEZ  
Type: numeric

Fill 2 or more entry with desired colors, then press "Apply"  
Apply

Auto  
Tries an automatic LUT on the current values

Reset  
Clears LUT input

External LUT Panel

0	-6.000000	Red
1	-1.000000	Red
2	0.000000	White
3	1.000000	Red
4	2.000000	Red
5	3.000000	Red
6	4.000000	Red
7	5.000000	Red
8	6.000000	Red
9	7.000000	Red
10	8.000000	Red
11	9.000000	Red
12	10.000000	Red
13	11.000000	Red
14	12.000000	Red
15	13.000000	Red
16	14.000000	Red
17	15.000000	Red
18	16.000000	Red
19	17.000000	Red
20	18.000000	Red
21	19.000000	Red
22	20.000000	Red
23	22.000000	Red
24	23.000000	Red
25	24.000000	Red





# Look Up Table

Check the "external LUT panel box"

Site: Calich\_pozzi\_03052004\_001@massimo

Attribute: color  
Field: QUOTA\_PIEZ  
Type: numeric

Fill 2 or more entry with desired colors, then press "Apply"  
Apply

Auto  
Tries an automatic LUT on the current values

Reset  
Clears LUT input

External LUT Panel

0	-6.000000	Red
1	-1.000000	Red
2	0.000000	Red
3	1.000000	Red
4	2.000000	Red
5	3.000000	Red
6	4.000000	Red
7	5.000000	Red
8	6.000000	Red
9	7.000000	Red
10	8.000000	Red
11	9.000000	Red
12	10.000000	Red
13	11.000000	Red
14	12.000000	Red
15	13.000000	Red
16	14.000000	Red
17	15.000000	Red
18	16.000000	Red
19	17.000000	Red
20	18.000000	Red
21	19.000000	Red
22	20.000000	Red
23	22.000000	Red
24	23.000000	Yellow
25	24.000000	Yellow



# Look Up Table

And here is the panel

The screenshot shows the 'External LUT Panel' in NVIZ. On the left, there are controls for selecting a LUT (local or external), viewing external LUTs, and importing/exporting LUTs. A color legend at the bottom left shows a gradient from red to yellow. The main part of the panel is a table with 27 rows (index 0 to 26) and 3 columns. The first column is the index, the second is the 'QUOTA\_PIEZ' value, and the third is a color swatch. A red arrow points from the 'Apply' button in the 'Attribute: color' section to the color swatches in the table. Below the table, there is a vertical color gradient bar with numerical labels: -6.000000, 18.000000, 38.000000, 58.000000, 87.000000, 141.000000, 270.000000, and 472.000000.

Index	QUOTA_PIEZ	Color
0	-6.000000	Red
1	-1.000000	Red
2	0.000000	Red
3	1.000000	Red
4	2.000000	Red
5	3.000000	Red
6	4.000000	Red
7	5.000000	Red
8	6.000000	Red
9	7.000000	Red
10	8.000000	Red
11	9.000000	Red
12	10.000000	Red
13	11.000000	Red
14	12.000000	Red
15	13.000000	Red
16	14.000000	Red
17	15.000000	Red
18	16.000000	Red
19	17.000000	Red
20	18.000000	Red
21	19.000000	Red
22	20.000000	Red
23	22.000000	Yellow
24	23.000000	Yellow
25	24.000000	Yellow
26	25.000000	Yellow



# Look Up Table

We want to export the LUT so to combine multiple LUTs

The screenshot shows the NVIZ software interface for configuring a Look Up Table (LUT). On the left, the 'External LUT Panel' is active, with the 'Export LUT' button circled in red. The central table lists values from 12 to 26, with corresponding color swatches transitioning from orange to yellow. On the right, a detailed LUT configuration window is open, showing the 'Attribute: color' and 'Field: QUOTA\_PIEZ' settings. A red arrow points from the 'Export LUT' button to the configuration window. The configuration window includes a 'Fill 2 or more entry with desired colors, then press "Apply"' instruction, an 'Apply' button, an 'Auto' button (described as 'Tries an automatic LUT on the current values'), and a 'Reset' button (described as 'Clears LUT input'). Below these buttons is a color gradient legend and a table of values from 0 to 25, with color swatches transitioning from red to yellow.

Value	Color
0	Red
1	Red
2	Red
3	Red
4	Red
5	Red
6	Red
7	Red
8	Red
9	Red
10	Red
11	Red
12	Orange
13	Orange
14	Orange
15	Orange
16	Orange
17	Orange
18	Orange
19	Orange
20	Orange
21	Orange
22	Orange
23	Orange
24	Yellow
25	Yellow



# Look Up Table

We can save the LUT to use it with other points

The screenshot shows the 'External LUT LUTO' dialog box in the foreground. It contains a color gradient bar with values ranging from -6.000000 (red) to 472.000000 (yellow). Below the bar are 'Save' and 'Delete' buttons. The background shows a data table with the following values:

12	10.000000		
13	11.000000		
14	12.000000		
15	13.000000		
16	14.000000		
17	15.000000		
18	16.000000		
19	17.000000		
20	18.000000		
21	19.000000		
22	20.000000		
23	22.000000		
24	23.000000		
25	24.000000		
26	25.000000		

A red arrow points from the 'Save' button in the dialog box to the data table.



# Look Up Table

Through this panel we can export and import LUTs among different Vector Points files adding points as needed.

External LUT Panel

Select LUT

local  
use LUT created here

external  
use external LUT (preserves local LUT)

View external LUT

NO LUT

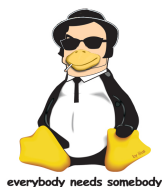
Import LUT

Use external LUT to fill local LUT

Export LUT

Use local LUT to fill external LUT

12	10.000000		
13	11.000000		
14	12.000000		
15	13.000000		
16	14.000000		
17	15.000000		
18	16.000000		
19	17.000000		
20	18.000000		
21	19.000000		
22	20.000000		
23	22.000000		
24	23.000000		
25	24.000000		
26	25.000000		



# Look Up Table

Through this panel we can export and import LUTs among different Vector Points files adding points as needed.

When we are done we can use the resulting LUT as an external LUT for every Vector Points file.

External LUT Panel

Select LUT

- local
- use LUT created here
- external
- use external LUT (preserves local LUT)

View external LUT

NO LUT

Import LUT

Use external LUT to fill local LUT

Export LUT

Use local LUT to fill external LUT

12	10.000000		
13	11.000000		
14	12.000000		
15	13.000000		
16	14.000000		
17	15.000000		
18	16.000000		
19	17.000000		
20	18.000000		
21	19.000000		
22	20.000000		
23	22.000000		
24	23.000000		
25	24.000000		
26	25.000000		



# TOC

- NVIZ: 3D navigation and flythroughs
  - Loading data
  - Navigation
- **NVIZ: working with 3D vector points with multiple attributes**
  - Different attribute value to each point
  - Multiple value for each point
  - Create and use Look Up Tables
  - **Access the related DB info**



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## Access DB info

It is possible to access the information of the associated DB clicking on each point in the 3D space.

It is further possible to access external multimedia files as hyperlink.



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## Access DB info

Select the pick panel



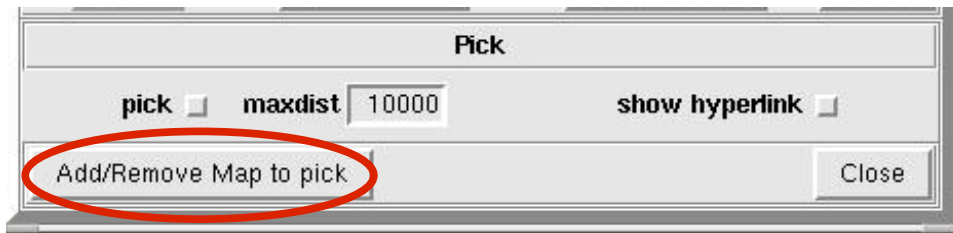
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## Access DB info

Click the “Add/Remove” button



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NVIZ: 3D Navigation and flythrough  
NVIZ: 3D vector points with multiple attributes

Different attribute value to each point  
Multiple value for each point  
Create and use Look Up Tables  
Access the related DB info

## Access DB info

And select Calich...



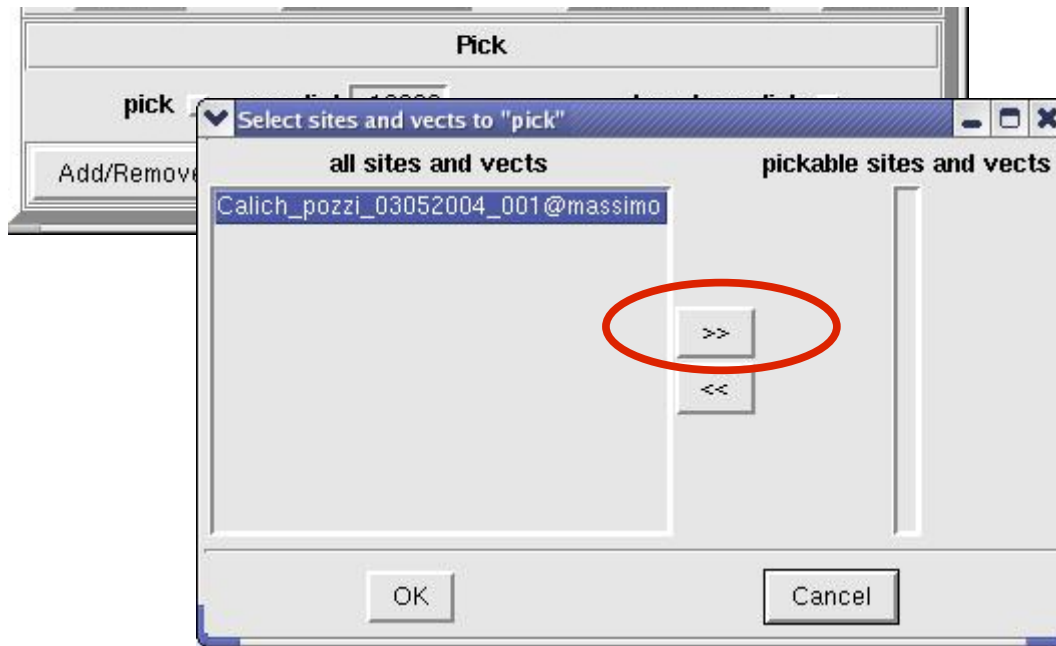
## Access DB info

Then press ">>"



## Access DB info

Then press ">>"

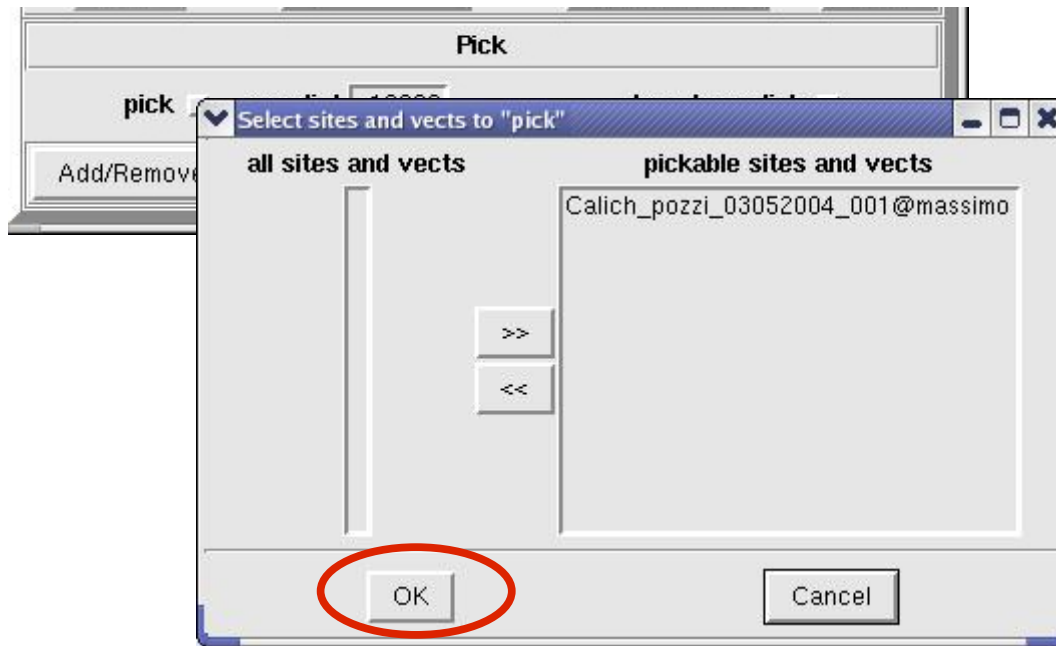


# NVIZ: 3D Navigation and flythrough NVIZ: 3D vector points with multiple attributes

Different attribute value to each point  
Multiple value for each point  
Create and use Look Up Tables  
Access the related DB info

## Access DB info

Then press ">>" and OK



## Access DB info

Now select "pick" box

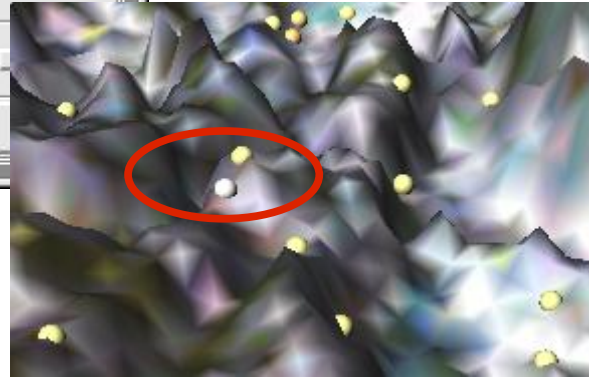


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## Access DB info

And pick on a point: it turns white...



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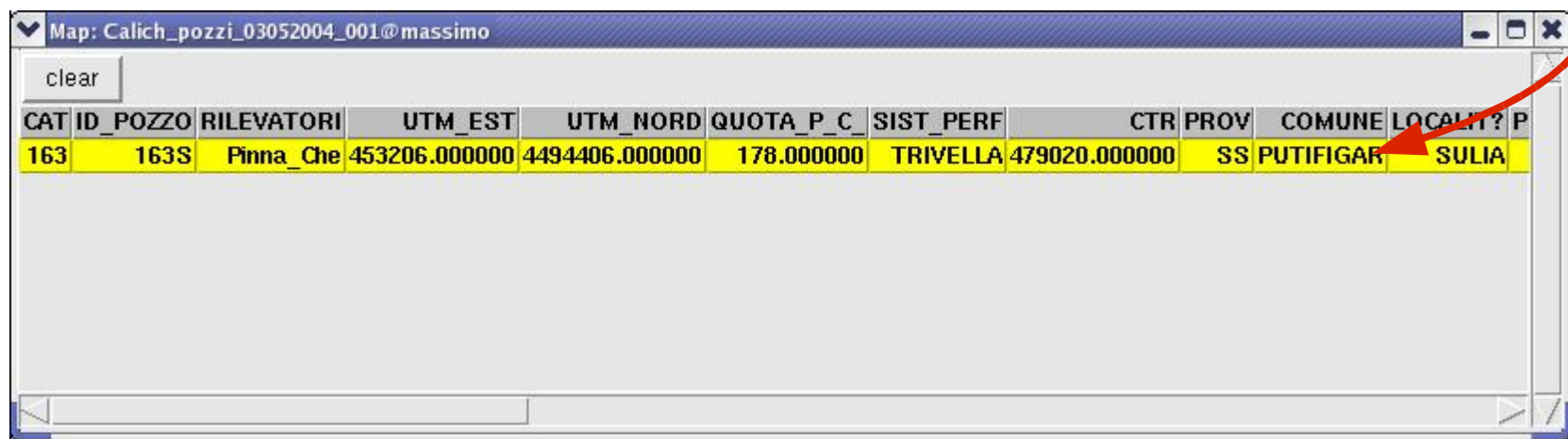
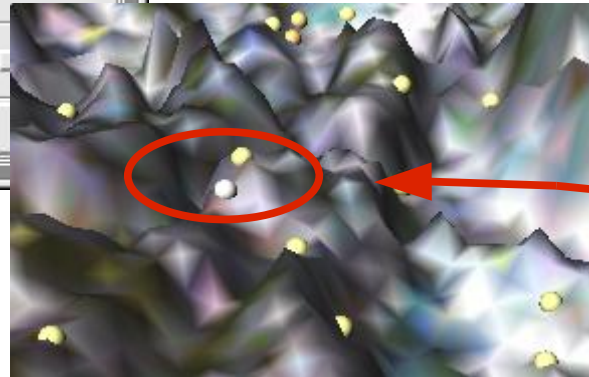


NVIZ: 3D Navigation and flythrough  
NVIZ: 3D vector points with multiple attributes

Different attribute value to each point  
Multiple value for each point  
Create and use Look Up Tables  
Access the related DB info

## Access DB info

And pick on a point: it turns white... and the DB window opens

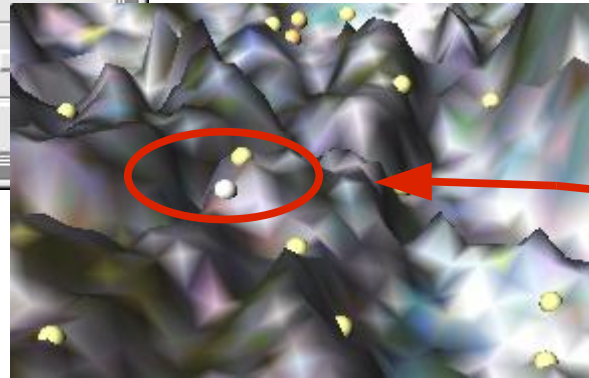


CAT	ID_POZZO	RILEVATORI	UTM_EST	UTM_NORD	QUOTA_P_C	SIST_PERF	CTR	PROV	COMUNE	LOCALITA	P
163	163S	Pinna_Che	453206.000000	4494406.000000	178.000000	TRIVELLA	479020.000000	SS	PUTIFIGAR	SULIA	



## Access DB info

Click on other points or on the table: corrispondence is kept



Map: Calich\_pozzi\_03052004\_001@massimo

clear

CAT	ID_POZZO	RILEVATORI	UTM_EST	UTM_NORD	QUOTA_P_C	SIST_PERF	CTR	PROV	COMUNE	LOCALIT?
163	163S	Pinna_Che	453206.000000	4494406.000000	178.000000	TRIVELLA	479020.000000	SS	PUTIFIGAR	SULIA
184	184S	Carletti	453597.000000	4491311.000000	209.000000	SCAVATO	479020.000000	SS	PUTIFIGAR	MONTE MAI
187	187S	Carletti	456554.000000	4492611.000000	282.000000	TRIVELLA	479020.000000	SS	PUTIFIGAR	MAIAMIALE
178	178S	Carletti	458227.000000	4492364.000000	291.000000	TRIVELLA	479030.000000	SS	ITTIRI	CHISCIA
179	179S	Carletti	457593.000000	4491509.000000	287.000000	TRIVELLA	479030.000000	SS	ITTIRI	CHISCIA



# TOC

- NVIZ: 3D navigation and flythroughs
  - Loading data
  - Navigation
- NVIZ: working with 3D vector points with multiple attributes
  - Different attribute value to each point
  - Multiple value for each point
  - Create and use Look Up Tables
  - Access the related DB info
  - Access external multimedia info
  - Highlight customization



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