

How to import a *.xyz- point cloud file into Micromine

The process below outlines the import process of a *.xyz point cloud file into Micromine. The process was completed in Micromine 2018, but there is significant improvement to point cloud modelling inside of Micromine 2020.

1. Import file into Micromine

As the *.xyz is an open source format it is easily import into Micromine. Use the option **File | Import | Text** and configure as below. Select the input file as your *.xyz file, this is a space delimited file without a header line. You can then select to automatically determine the output files structure automatically. Select a name for the output file. You can also check the import is correctly configured by previewing the import by selecting 'Scan rows'. This will preview a select number of rows checking the structure. Note as the file has not header automatic names have been assigned. These can be modified after the file import. The imported file will become a native *.dat Micromine file.

Import Text File

Input

File: cloud.xyz

Format: SPACE DELIMITED

Delimiter: []

Decimal separator: []

Field Name Header

One row

Several rows: []

Rows To Ignore

Start of file: []

After header: []

End of file: []

After row: []

Import empty records

Output

File: pcv1

Type: DATA

Report file: CSV_Import_Report

Expand report to identify row number for each error (Verbose)

Auto open file for editing

Fields To Import

Select All Clear All Preview Scan Rows Scan File

Name	Type	Width	Decimals
<input checked="" type="checkbox"/> Name0	R		6
<input checked="" type="checkbox"/> Name1	R		6
<input checked="" type="checkbox"/> Name2	R		6
<input checked="" type="checkbox"/> Name3	S		
<input checked="" type="checkbox"/> Name4	S		
<input checked="" type="checkbox"/> Name5	S		

Output File Structure

Determine from Input file Rows to scan: 1000

Use Output file

Use Template File

Name: []

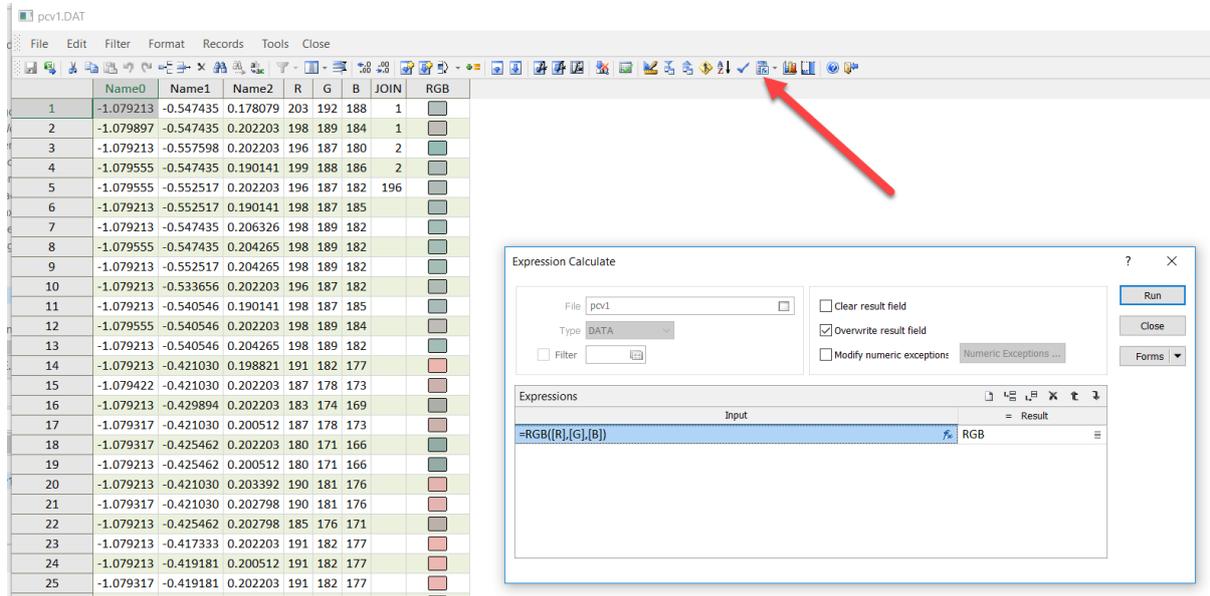
Type: DATA

Run Close Forms

2. Convert triplets into a single RGB value

Typically, Micromine displays the colour from a singular selected field. The *.xyz file contains three items R,G,B (known as a triplet) to configure the colour of each point. To display the colour correctly, Micromine needs to merge all three of these values into a single item. This is easily done inside of

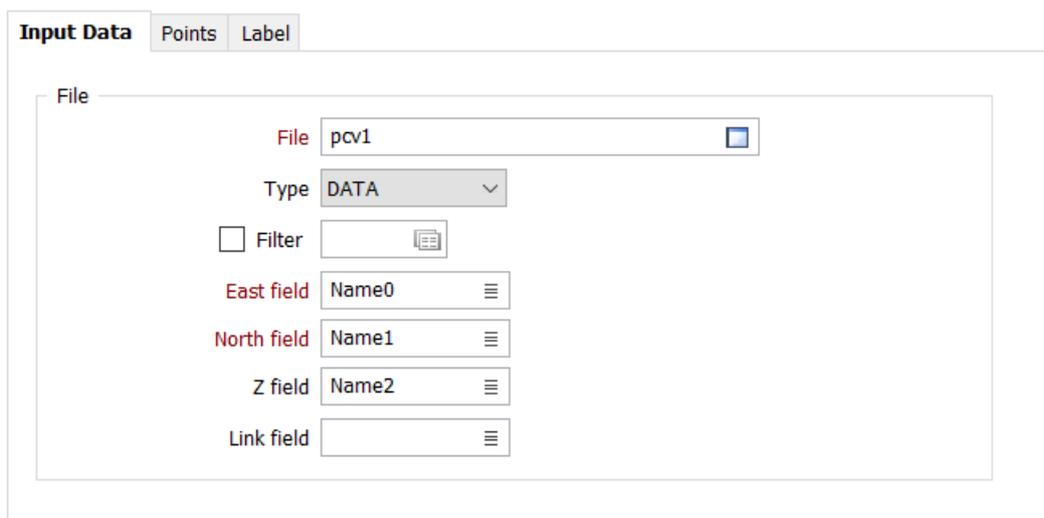
the source file via the calculate expression tool. Before running the calculation, it is advised to create a new Item called 'RGB' and set it as type colour. Configure the expression as "=RGB([r],[g],[b])" where bracketed items are the RGB value items (as below).



3. Display and filter point

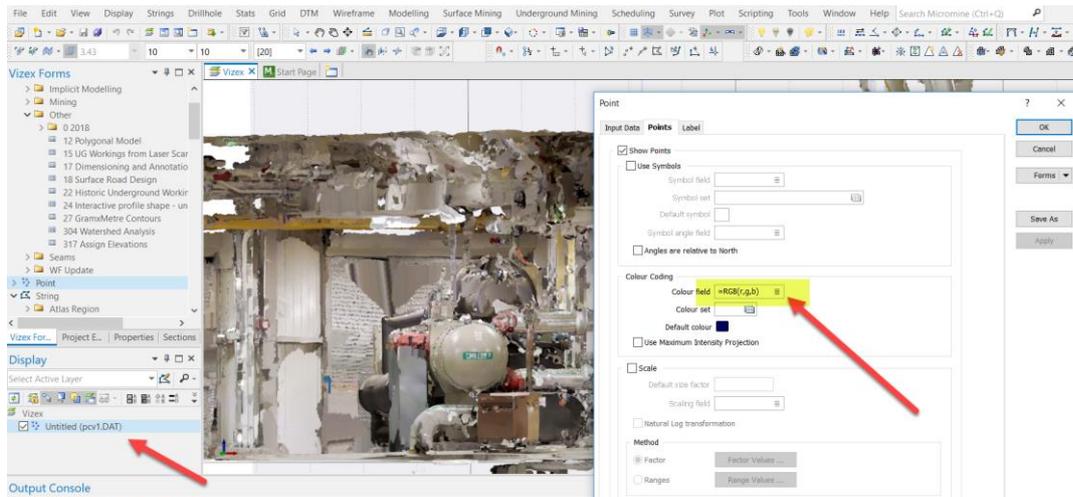
To display the point cloud file simply select a point Vizex form and correctly configure it to the imported text file and the correct X,Y,Z values.

Point



To colour the point cloud/ points by the newly created merged item 'RGB' you only need to configure the colour field under the 'Points' tab. Instead of providing a colour set, you specify a formula that alerts Micromine that the selected colour field is the colour value and what format it is

in. So as we are using the R,G,B colour scheme and my item was called RGB so I provided the formula `"=RGB(r,g,b)"` into the colour item field



4. Validate the import

Check the import has been successful by ensuring the points looks correct and are in the right location.

