## C:\Users\Mike\MikeDocs\DMU\Year 3\Ubisoft Tech Aart Test\MaxScriptTest\pics\UI.jpgMaxscript Test

Familiar with MaxScript, I set about implementing the functionality requested for the test. The result can be seen in MXS\_InterviewTestScript\_basic.ms.

Extended Functionality

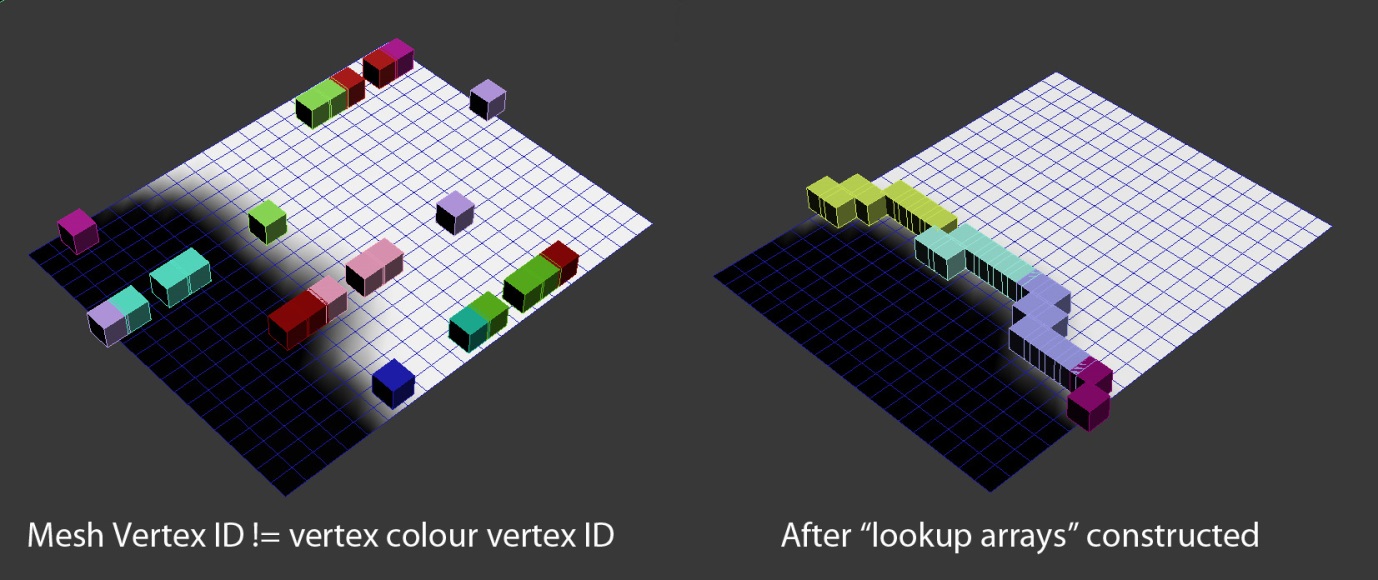
As I saw it, the tool would be used to populate scenes with geometry to mimic organic or semi-organic scattering. I had in mind populating a terrain piece with trees. To this end I wanted to improve on three main aspects:

* Additional tools for “chaos” (random scales, rotations, offsets, bend)
* User control over placement using vertex colour
* The distribution of multiple different objects for better variation

I designed the user interface for the tool first. Although I made modifications along the way, the final design (shown right) is very similar to what I started with.

Vertex Colour obstacle

My main challenge with this script was using the vertex colour. I was not aware that a meshes vertex ID did not correspond to a vertex colour’s vertex ID. This was something I confirmed by attempting to place boxes at vertex colours of 0.3-0.7 (below and left). I was able to find an explanation of the subject in the MaxScript Help (which I use frequently while scripting) [here](http://docs.autodesk.com/3DSMAX/15/ENU/MAXScript-Help/index.html?url=files/GUID-CBBA20AD-F7D5-46BC-9F5E-5EDA109F9CF4.htm,topicNumber=d30e374274).

Of course, it made a lot of sense why a one-to-one relationship does not exist, but accepting that I only wanted one vertex colour per vertex, I was able to construct a workaround which populated two arrays: one an array of the meshes vertex IDs which pointed to *one* of the corresponding vertex colour vertex IDs, and another array which did the reverse. I was then able to perform the same test with success (below and right)

Final Solution

My final solution works as intended. I was able to also include some more advanced functionality, best demonstrated in the accompanying video.

I threw together a couple of quick objects to demonstrate what the tool might look like in actual use.

