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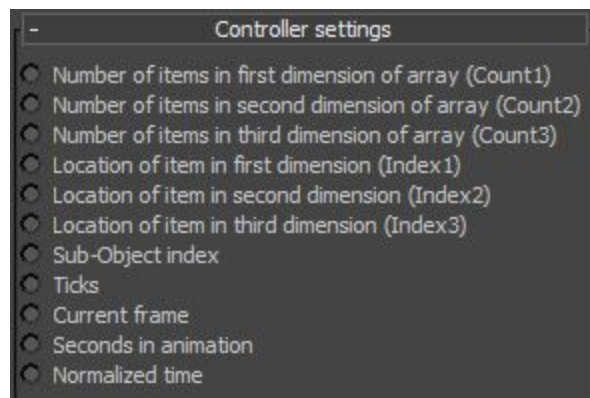
Array Variable Controller

This controller returns some basic information about the array members and current scene states. Note that controller retrieve the information from the members of the first parent (container) node in a Paraflow. Also if the controller is used under Array Variable Override controller then the new values that are overwritten by the AVO will be returned. This controller can generate two types of output:

Scalar Output

Following options are available when controller output is scalar:

- **Count1** : When this option is selected controller returns the number of members in first dimension.
- **Count2** : When this option is selected controller returns the number of members in second dimension.
- **Count3** : When this option is selected controller returns the number of members in third dimension.
- **Index1** : When this option is selected controller returns the first index of member which refers to the location of member in first dimension.
Possible values : $1 < x < \text{Count1}$
- **Index2** : When this option is selected



controller returns the second index of member which refers to the location of member in second dimension.

Possible values : $1 < x < \text{Count2}$

- **Index3** : When this option is selected controller returns the third index of member which refers to the location of member in third dimension.

Possible values : $1 < x < \text{Count3}$

Note :

In above options if the controller is used under an Array Variable Override controller and the same item has been override in AVO then the new value will be returned.

- **Sub-Object index**: If the array member has control points in its sub-objects (polygon mesh or spline-shape or FFD modifiers) and controller or any of its parent is assigned to this property then controller returns the index of the control point. For example if array members is an editable mesh and this controller is indirectly assigned to the fifth vertex the controller return 5 as result.

Note :

This number does not necessarily follows the order of control points in the geometry.

Note :

If array member has no control points or the controller is not assigned to a sub-object property then Para reports an error.

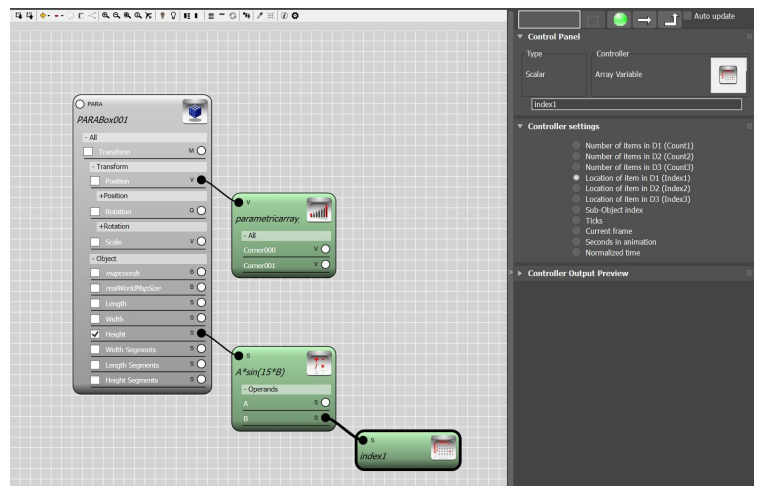
Possible values : $1 < x < \text{number of control points in the array member}$

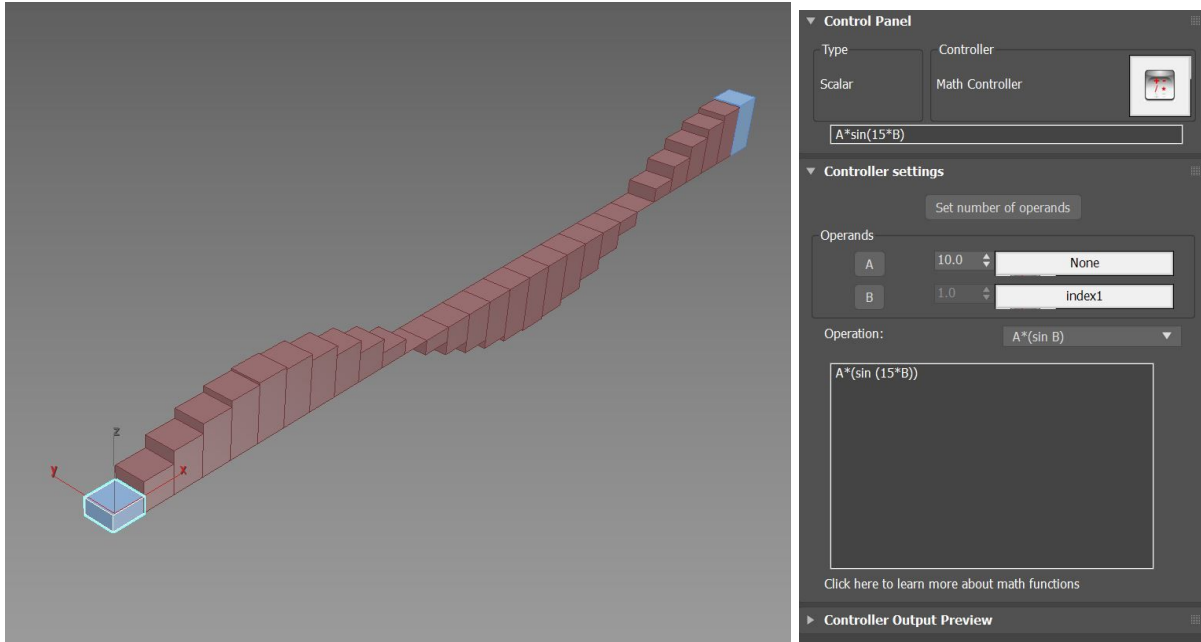
- **Ticks** : When this option is selected controller returns the current location of time slider in [Ticks](#) format.
- **Current frame**: When this option is selected controller returns the current location of time slider in [Frame](#) format.
- **Current frame**: When this option is selected controller returns the current location of time slider in Seconds.
- **Normalized time**: When this option is selected controller returns the current location of time slider in [Normalized time](#) format.

Note: Using any of last four of above options can create animation.

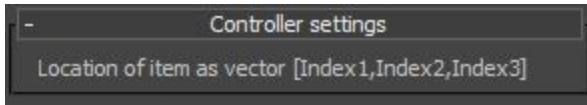
Example 1:

In below example the index1 has been extracted to define the wavelength of the *sin* wave. Since the index1 increments by 1 the value has been multiplied by 15 in **Math controller** to achieve the desired result. Note the angle in *sin* function is considered in degree.





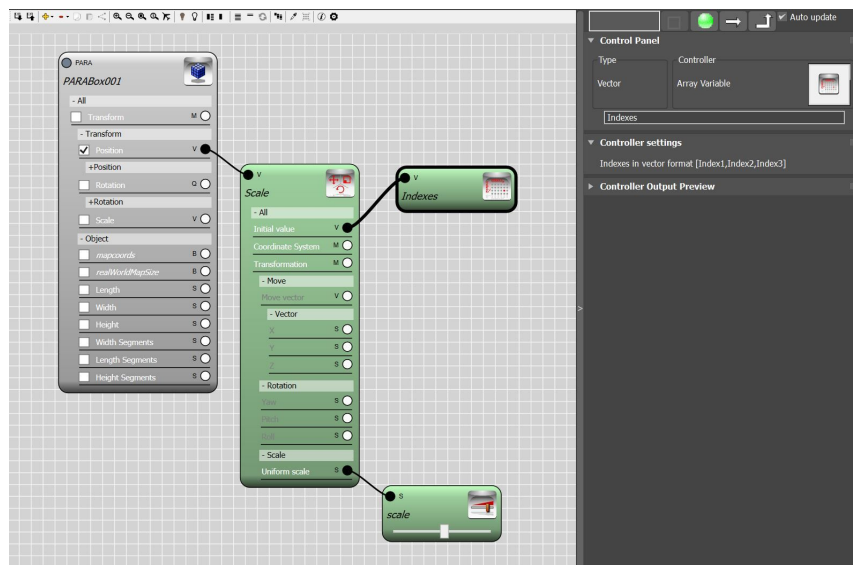
Vector output

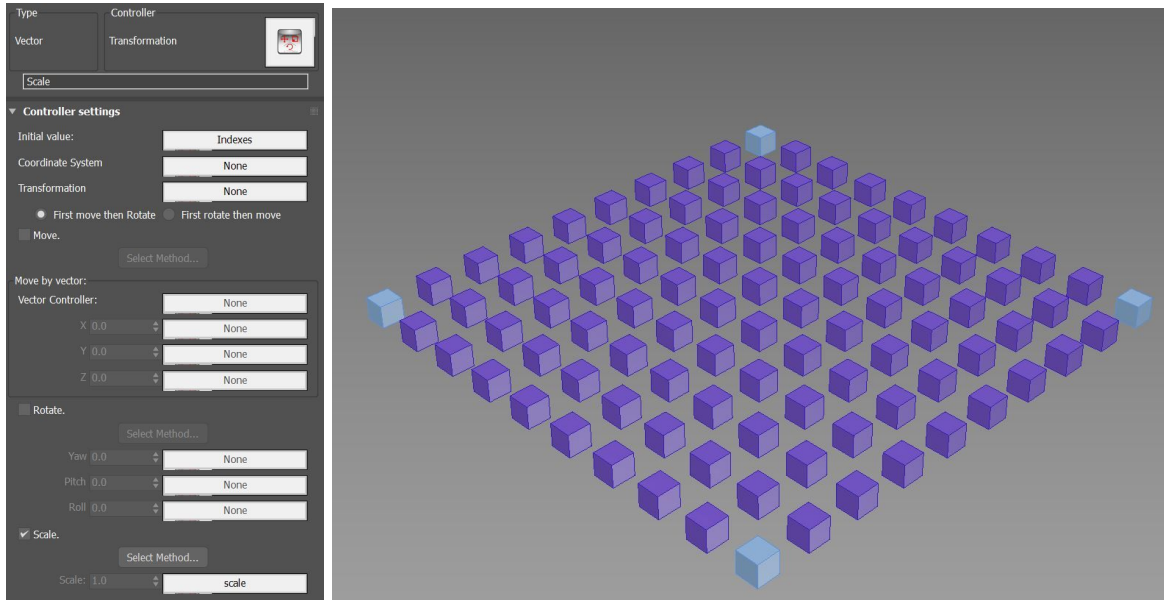


Controller returns the location of member in its three dimensional array. Basically the result is combination of three index values (index1,index2 and index3) as a vector value.

Example 2:

In below example the position vector of the members in array has been scaled using **Transform controller** to layout a grid. Note the position vector for the first item is [1,1,1] therefore the first item will be located at $[x,x,x]$ where x is the scale factor.





To move the grid on zero plane we need to translate the position vector by a negative unit vector. Therefore the result transformation will become :

$$\text{Scale} * ([\text{index1}, \text{index2}, \text{index3}] - [1, 1, 1])$$

In order to move the position vector activate the move function in **Transform controller** and enter -1 in X , Y and Z components.

