Protofield Operator Class UCA

Protofield operators perform translations on Protofields encompassing a principle of field remixing required by the primal maths concept. One operator class has been observed, the UCA. It consists of ordered collections of natural numbers, including zero. UCA refers to operator visibility through the use of cellular automata, CA, U refers to the unitary aspect of a single element of control, a prime number. All spaces whose dimensionality can be enumerated with a prime number contain unique classes of operators based on the specific control prime. All space groups associated with a prime dimensional space also contain a unique sub class of operators. A special class of operators, named harmonious, occurs when the magnitude of the control prime and the dimensionality of the space are identical. The Dimensional Reduction Conjecture, DRC, states that some or all N dimensional operators derived from sections of an M dimensional parent space, where M > N, are neither computable nor calculable in the N dimensional space.

This document describes the UCA framework in relation to geometric alphabets, syntax and narratives derived using the UCA. This work has no reference material or background therefore only conceptual descriptions may be given and have been described earlier as transcendent transcoding utilising the transcendent transcode algorithm. Some attempt to explain this subject is available on the following links:

Research Videos Schedule >
3D rendering experiments >
Hi Res 3D rendering download >
Species Invariant Geometric Languages >
Graphic Description of UCA >
Concepts of Primal Maths >

Symbols and Narratives Examples.

A two dimensional rectangular UCA with a control prime CP displays symbols of an alphabet as a rectangular array dimensioned CP x CP.

The topology of an alphabet symbol can be generalised by the following expression:

<control prime,number of dimension 1 symbols,number of dimension 2 symbols, symbol injector>

Each symbol in the injector can have its own unique sub injector. Symmetric injectors lead to symmetric alphabets. The following are examples of various symbol topologies(colours map to natural numbers, including zero):

Example <59,3,3,SI>
SI =
<a,b,a>
<b,c,b>
<a,b,a>

Example <223,7,7,SI>
SI =
<a,b,c,d,c,b,a>
<b,c,d,e,d,c,b>
<c,d,f,g,f,d,c>
<d,e,g,g,e,d>
<c,d,f,g,f,d,c>
<b,c,d,e,d,c,b>
<a,b,c,d,c,b,a>
Example of a narrative with two non entangling base alphabet topologies, above.

Example of a narrative with two entangling base alphabet topologies showing derivatives, below.
Symbol injectors derived using a different control prime can lead to very complex and geometric narratives.
Specific UCA operator symbols in the narrative translate protofield primitives in a one to one manner. To achieve a many (symbol) to one translation, UCA have narrative injectors and multipliers where many similar symbols arrange themselves in a local ordered manner. A section of a many to one operator narrative is shown below and a larger example can be viewed at this link.
Larger control primes using symmetric injectors produce complex and highly symmetric alphabets.
Many levels of asymmetry behaviour is displayed in alphabets