SOME IDEAS ABOUT LOSP

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1. The concepts of Pervasive Space, Universal Distinction, and Formal Space are sufficient for a Boolean Arithmetic.

2. A Boolean Algebra using these concepts has these transformation rules:

replication:	a a	<==> a
domination:	[ ] a	<==> [ ]
pervasiveness:	[a b] b	<==> [a] b
reflection:	[[a]]	<==> a

Other valid transformations include:

distribution:	a [[b] [c]]	<==> [[a b] [a c]]
flex:	[[[a] b] [a c]]	<==> [[a] [b]] [a [c]]

3. These configurations map onto various interpretations of a Boolean Algebra (I'll use "><" as the empty space):

><	zero element, false, empty set, open switch
[ ]	unit element, true, universe, closed
[a]	unary operation, not, complement, opposite
a b	binary join, or, union, parallel
[[a] [b]]	binary meet, and, intersection, series
[a] b	inclusion, implies, subset, if closed then closed

As well,

a b ... z	variary join, or, union, parallel
[[a] [b] ... [z]]	variary meet, and, intersection, series

4. Unique characteristics of Losp are:

   a. Order or sequence in a space is not distinguished.

   b. The number of elements involved in an operation does not matter; i.e., >< and [] are variary operators.

   c. There is a one-to-many mapping from LOSP onto an interpretation such as propositional logic.

5. Advantages are:

   a. A single explicit token represents all operators.

   b. Transformation rules can be applied to expressions in parallel. >< partitions an expression into independent sub-expressions.

   c. Some transformations are powerful.

   d. It is easy to integrate semantic attachment and syntactic simplification when evaluating an expression.

   e. Exhaustive techniques (such as truth-tables, linear pattern-matching, and blind search) are converted into techniques of algebraic transformation that are both algorithmic and "smart".

   f. Many traditional distinctions are unified (only at a very abstract level): eg. object-process, proof-transformation, system-control.