A SPECIFICATION LANGUAGE FOR VIRTUAL WORLDS

The basic facility:

creation of labels for elementary objects in the world
creation of terms expressing complex structures between relations
creation of equations which permit algebraic operations
on labels and terms

The set of unique labels defines the elements of the Domain. They map onto objects in the semantic model.

The set of permissible terms defines the structures of the Domain. Structures require operators for Construction and for Access/Deconstruction.

The set of specified equations defines the virtual world, and provides substitution as the primary computational mechanism.

Definitions

labels:	Domain-labels = {a b c d ...}
terms:	
pattern sets:	set-label = { members-of-set } or Pattern___
procedural logic:	doIF Term doTHEN Term = boolean-term
build-your-own:	function(set-argument) = definitional-term
	relation(matrix-argument) = boolean-term
equations:	Term1 = Term2
worlds:	world-label = { set-of-equations }

Pattern Language

name_	matches one item in a set
name__	matches one or more items
name___	matches one or more or no items

Database Manipulation

```
Get(pattern_ from set_)
Put(term into set)
Copy(pattern_ from set_)
```

Mechanism

Available process threads are assigned to equations.

Equations are expanded via match-and-substitute until no more matches.

Labels which are not recognized by the pattern matcher are "literal".

Input devices put values into an associated equation.

Display devices get values from an associated equation.