

ADAM V. BE

INFORMATION

PROGRAMMING

WHAT CAN IT DO

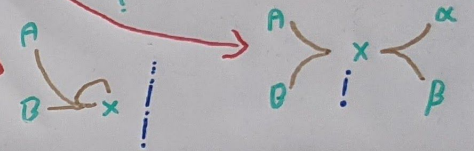
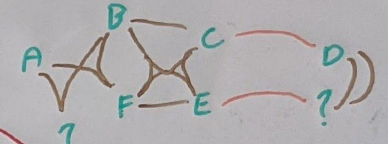
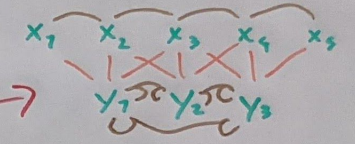
PROBLEMS
 RECOGNITION
 COMPLETION
 CHECKING
 CALCULATION

FEATURES
 GUARANTEES
 MULTI-MODAL
 VERSATILE
 SCALABLE

INCREASING INFORMATION

LAW ABIDING

INFORMATION ALGEBRA
 LATTICES
 GALOIS CONNECTIONS

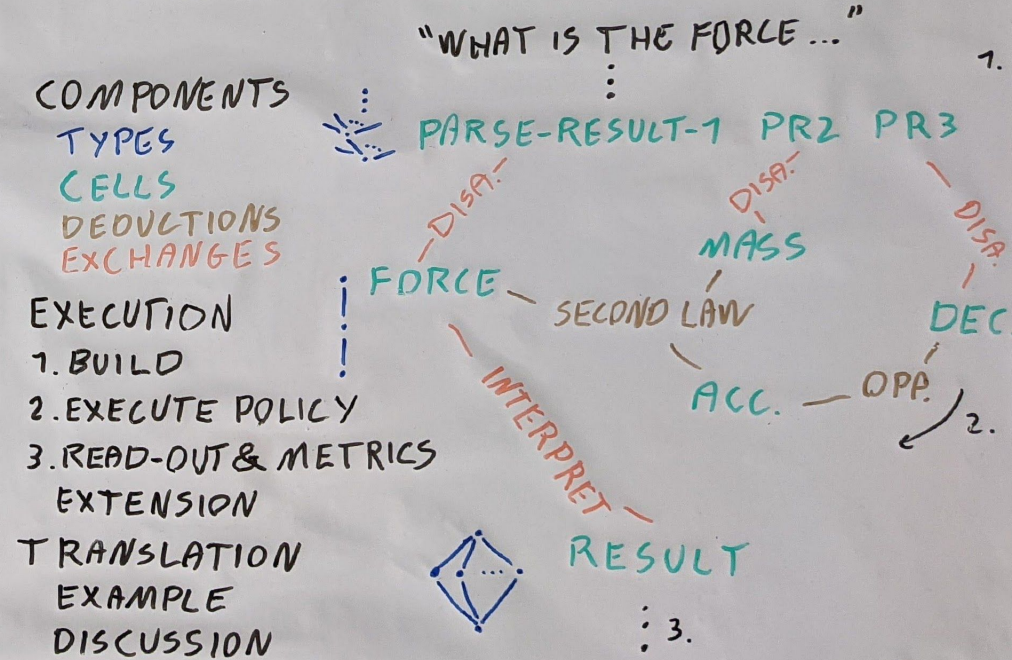


INTRODUCTION

WHAT IS IT

SYMBOLIC		SUB-SYMBOLIC DATA
"		" RUNTIME SPECIFICATION
"		"
HUMAN CONSTRUCTED PRE		MACHINE (LANGUAGE) META (SYSTEM) LIVE (COMPUTE)
SOLVER MYOPIC ONE WORLD		AGENT PLANNING IRREALIS WORLDS

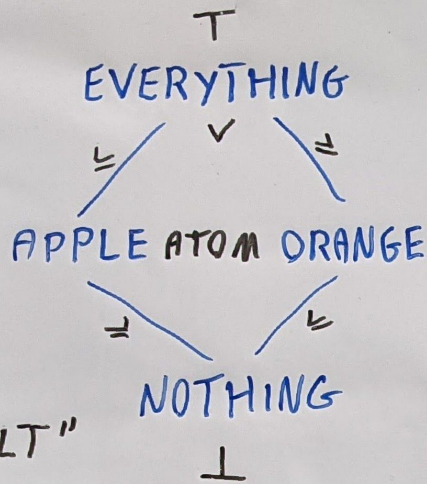
HOW DOES IT WORK



KERAS.10 GEN.DEV NEO4) ATOMSPACE I.P.

TYPES

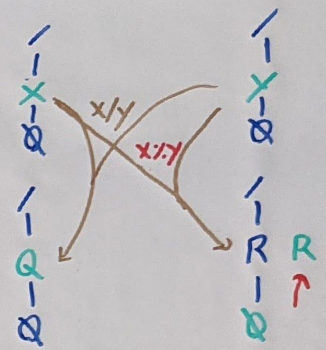
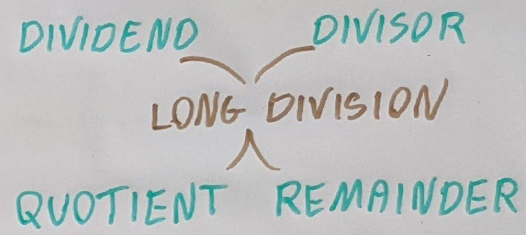
- PARTIAL ORDER
- \leq "ALREADY KNOWN"
- COMPARABLE
- BOUNDED SEMILATTICE
- \perp "NO INFORMATION"
- \vee "JOIN"
- OPTIONALLY
- T "OVERCOMPLETE"
- ATOM "DEFINITE RESULT"



$$x \leq y \Leftrightarrow x \vee y = y$$

DEDUCTIONS

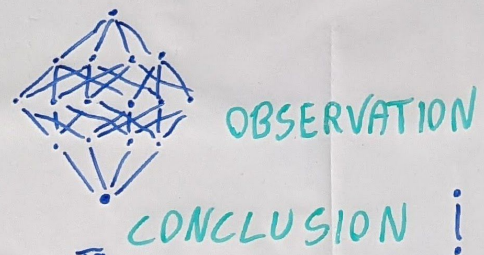
- PARTIAL FUNCTION(S)
- HOST LANGUAGE
- DEFINED AT
- BETWEEN CELLS
- MANY TO MANY
- (OF THE SAME TYPE)
- INCREASING INFORMATION
- DISCARD OPTIONS
- ADD FEATURES
- IMPROVE RESULT



COMPONENTS

CELLS

- BUILD TIME
- SPECIFY TYPE
- CONTAINER
- LABELLED/GROUPED
- RUN TIME
- STARTS AT \perp
- UPDATED WITH \vee
- METRICS / PROPERTIES
- USED IN TRANSFORMATIONS



$$\begin{aligned} \square \vee \square &= \square \\ \text{TRUE} \vee \text{FALSE} &= \text{TRUE} \end{aligned}$$

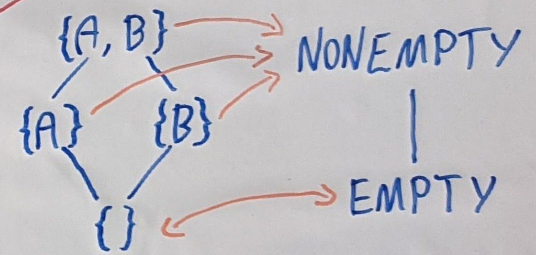
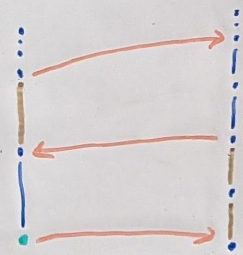
TRUE
|
FALSE

EXCHANGES

- LIKE DEDUCTIONS BUT
- BETWEEN DIFFERENT TYPES
- ONE TO ONE
- WITH EXTRA
- BIDIRECTIONALITY
- MONOTONICITY

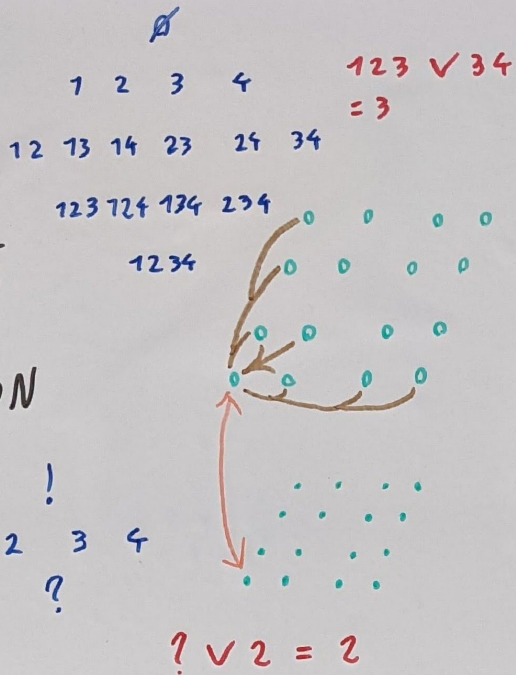
$$\begin{aligned} L: A &\rightarrow B \\ R: B &\rightarrow A \end{aligned}$$

$$\begin{aligned} \alpha &\leq R(L(\alpha)) \\ \beta &\leq L(R(\beta)) \end{aligned}$$



THE FLOW

- BUILD TYPE INSTANCES
- CELL STRUCTURE CONNECTIONS
- POLICY SELECTION
- RUN POLICY
- (READ-OUT)



INPUT PROPAGATION

EXAMPLE

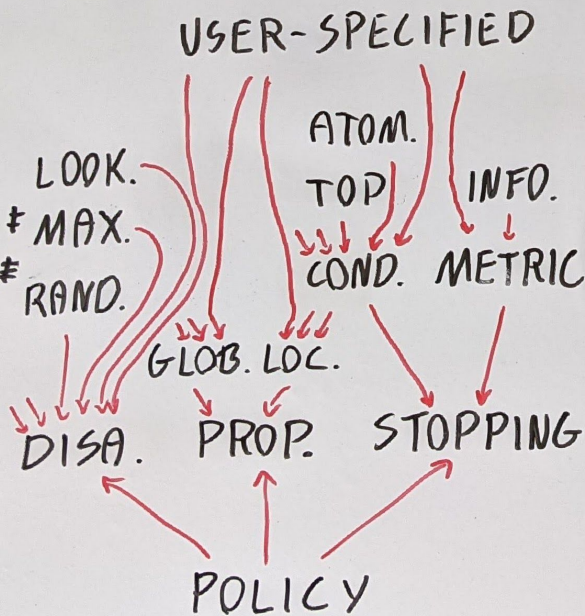
IN CODE!

EXECUTION & TRANSLATION

POLICY EXTENSION

ADAM V. BE

- NATIVE BUDGET
- EXECUTIONS+ LOOK.
- CELL UPDATES+ MAX.
- RUNNING TIME+ RAND.
- FIXED POINT
- SEARCH METRIC
- BACKTRACK
- COMPOSITE



TEST IT OUT!

THANK YOU!