Problems of application programming

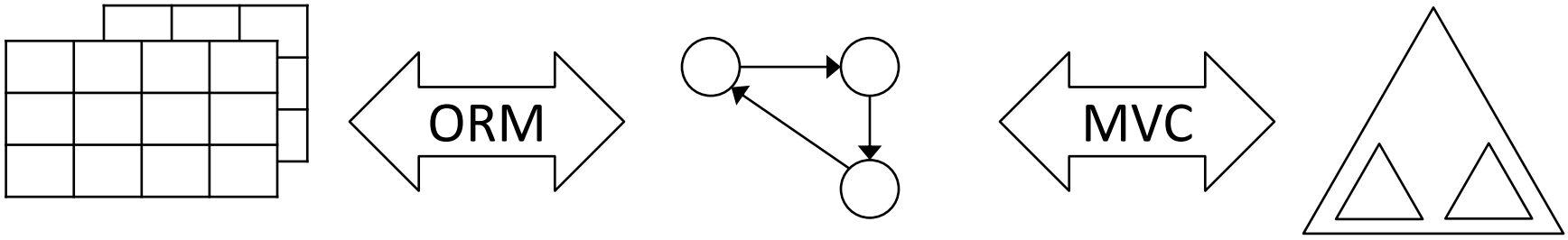
WG2.16 Feb 2012

Jonathan Edwards

sdg MIT

Application

Problem 1: impedance mismatch

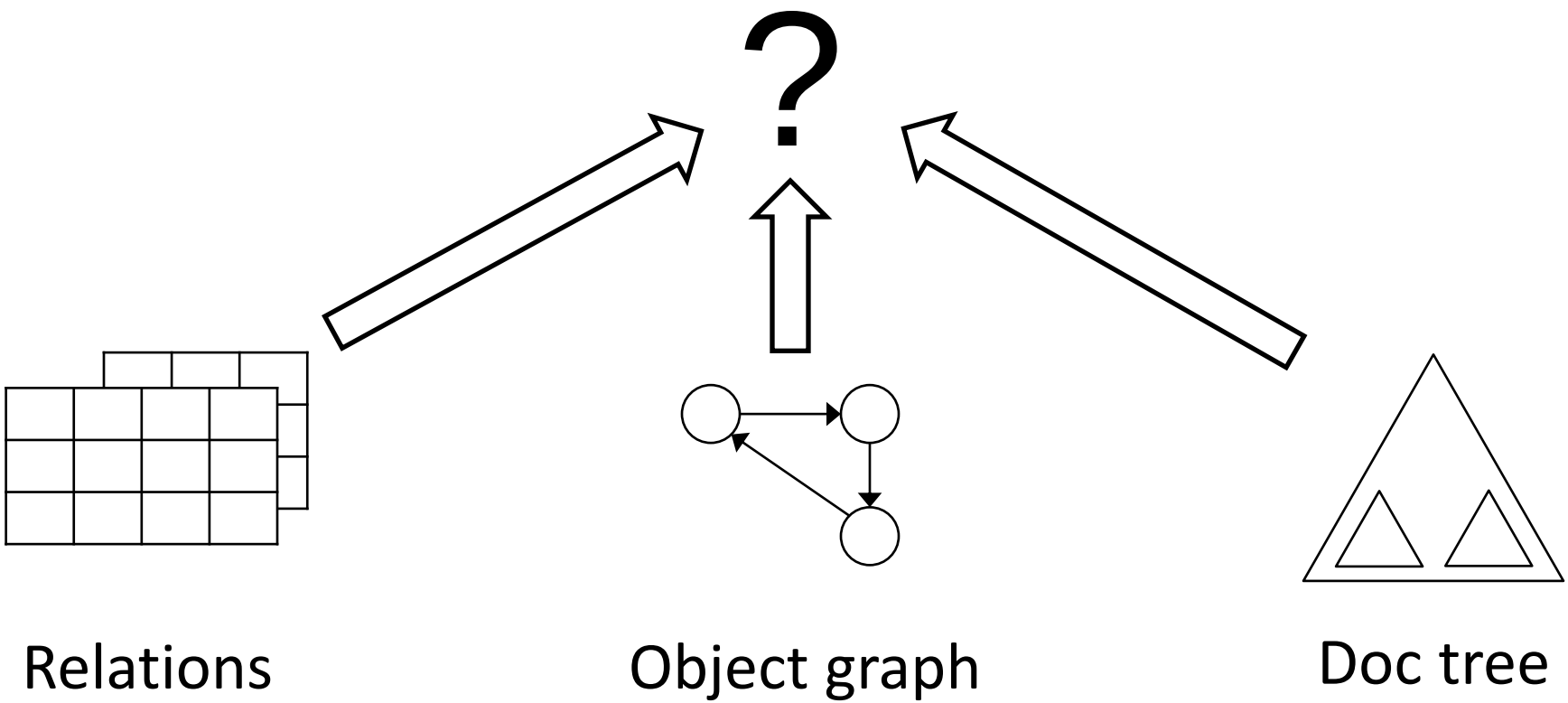


Relations

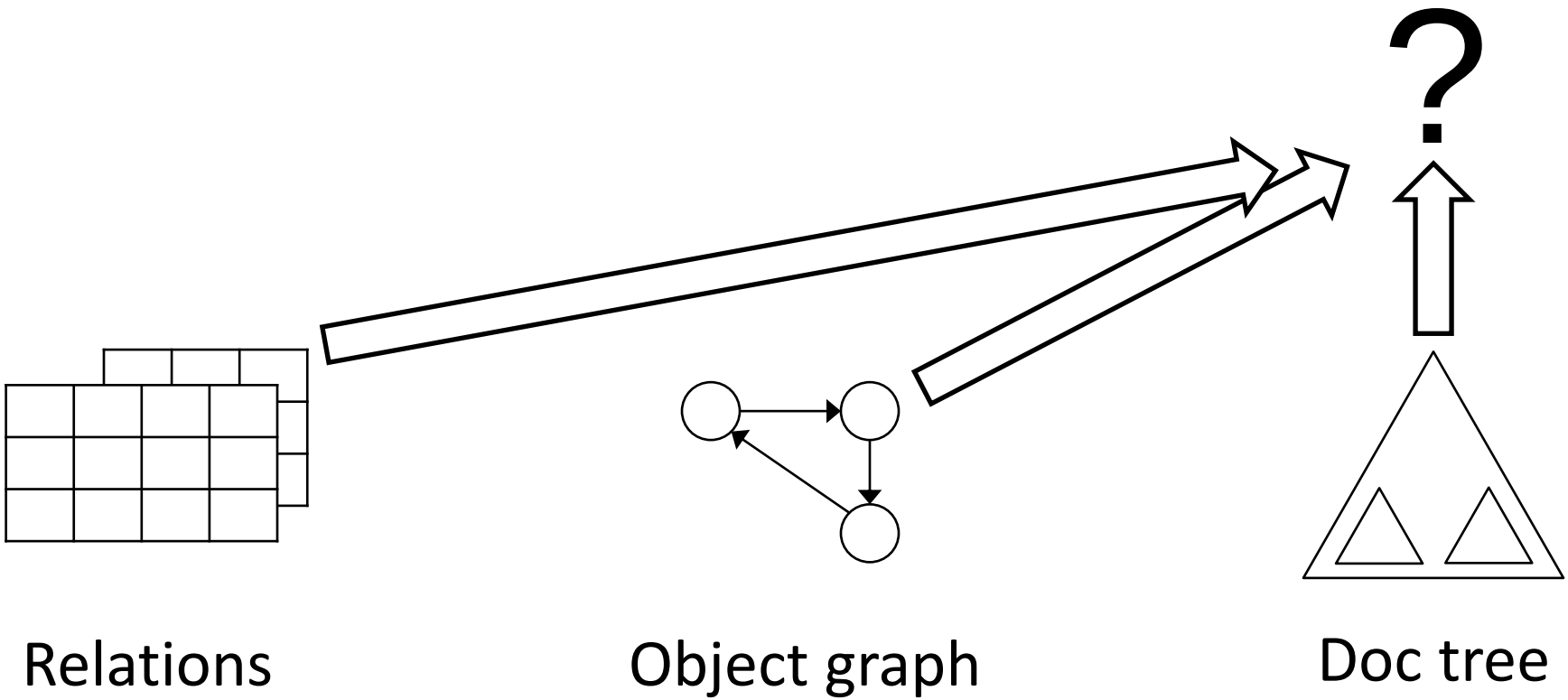
Object graph

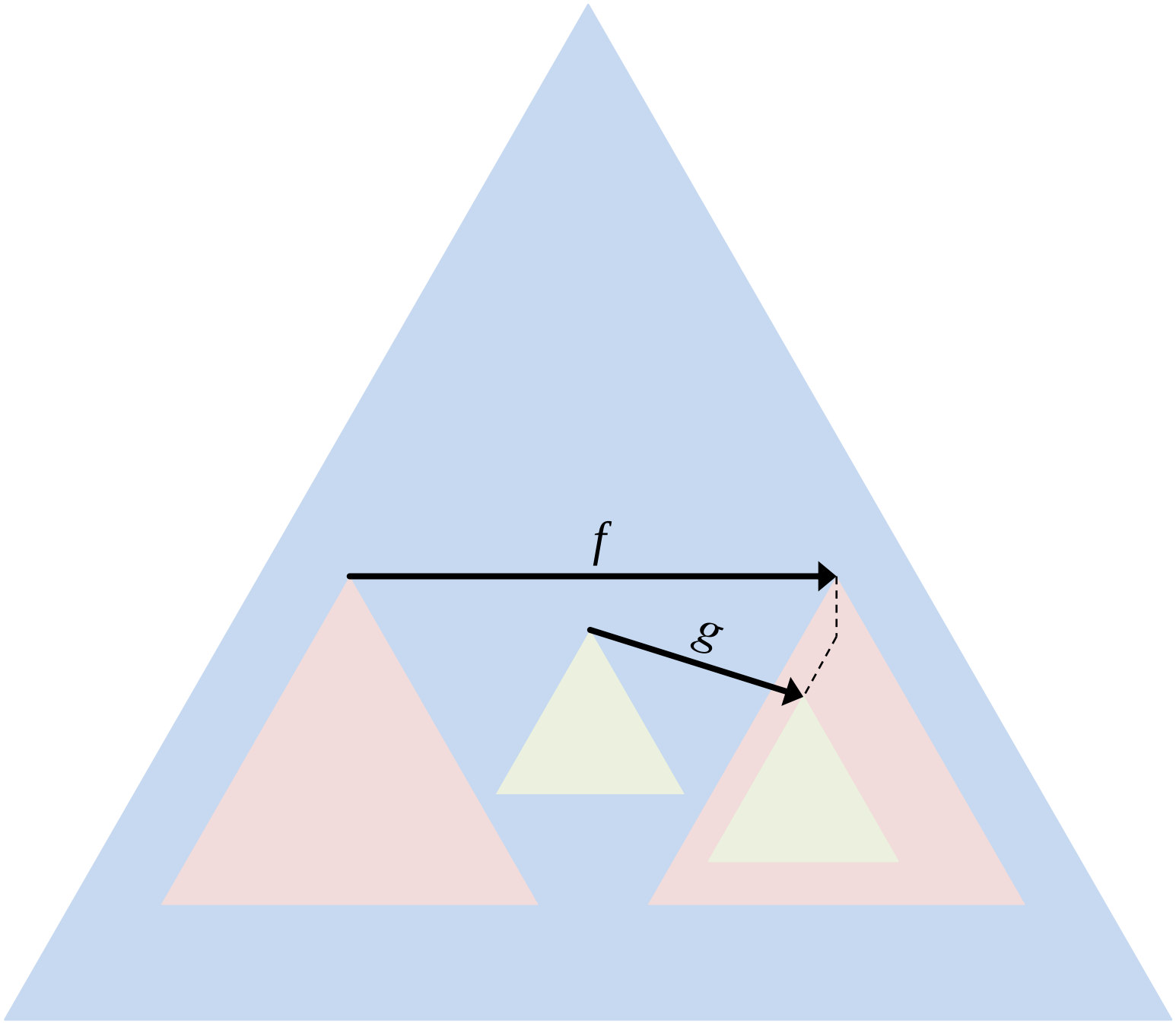
Doc tree

Solution: unification



Solution: unification




f
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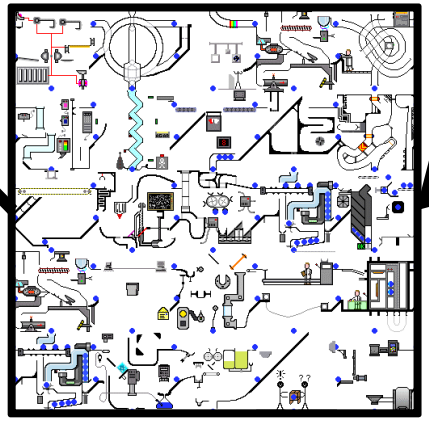
Problem 2: input

query/render

Model



View

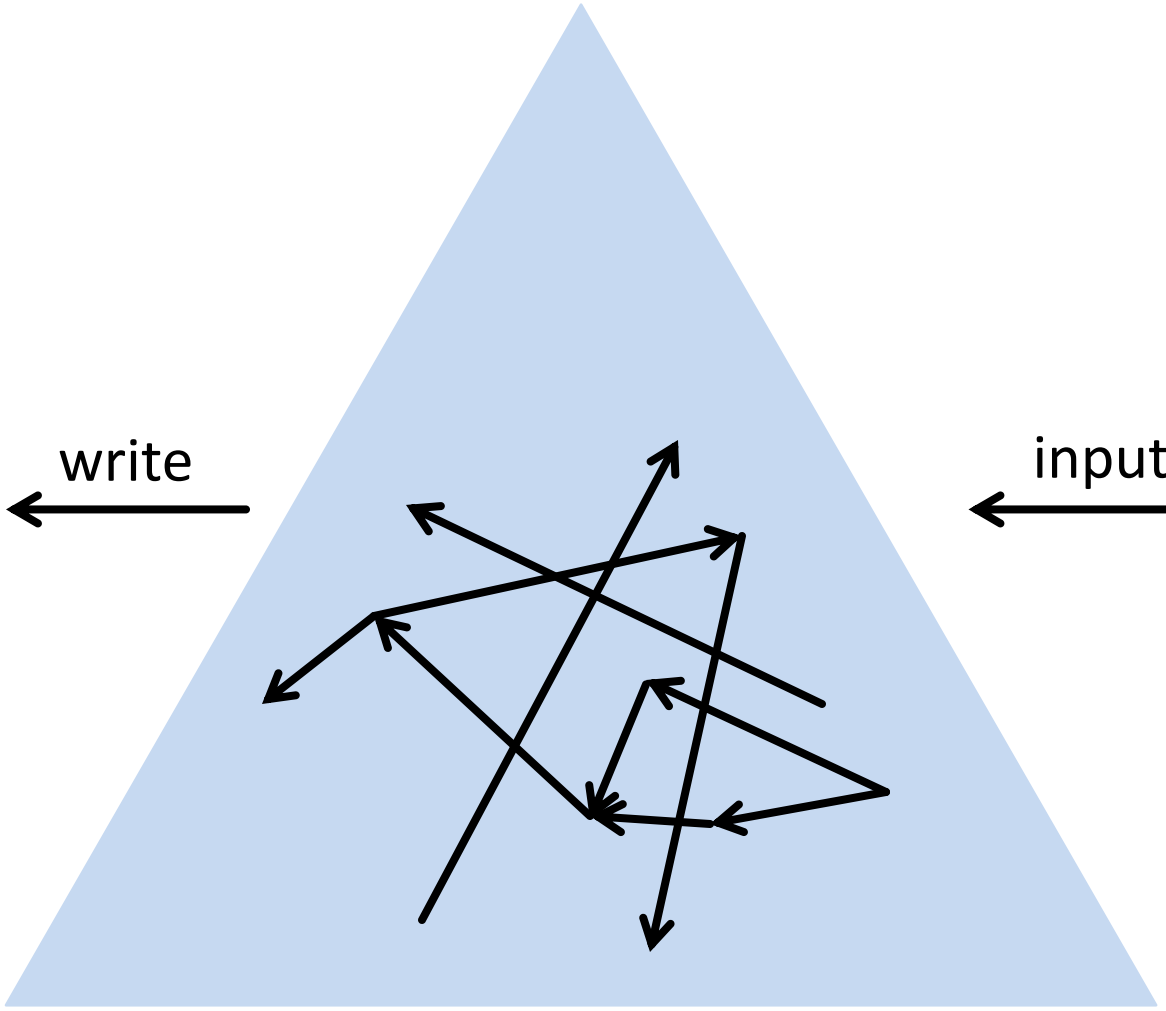
Controller

- 1/3 of the code in Adobe's desktop applications is devoted to event handling logic
- 1/2 of the bugs reported during a product cycle exist in this code

— Sean Parent, Adobe Software Technology Lab 2006

http://stlab.adobe.com/wiki/images/0/0c/Possible_future.pdf

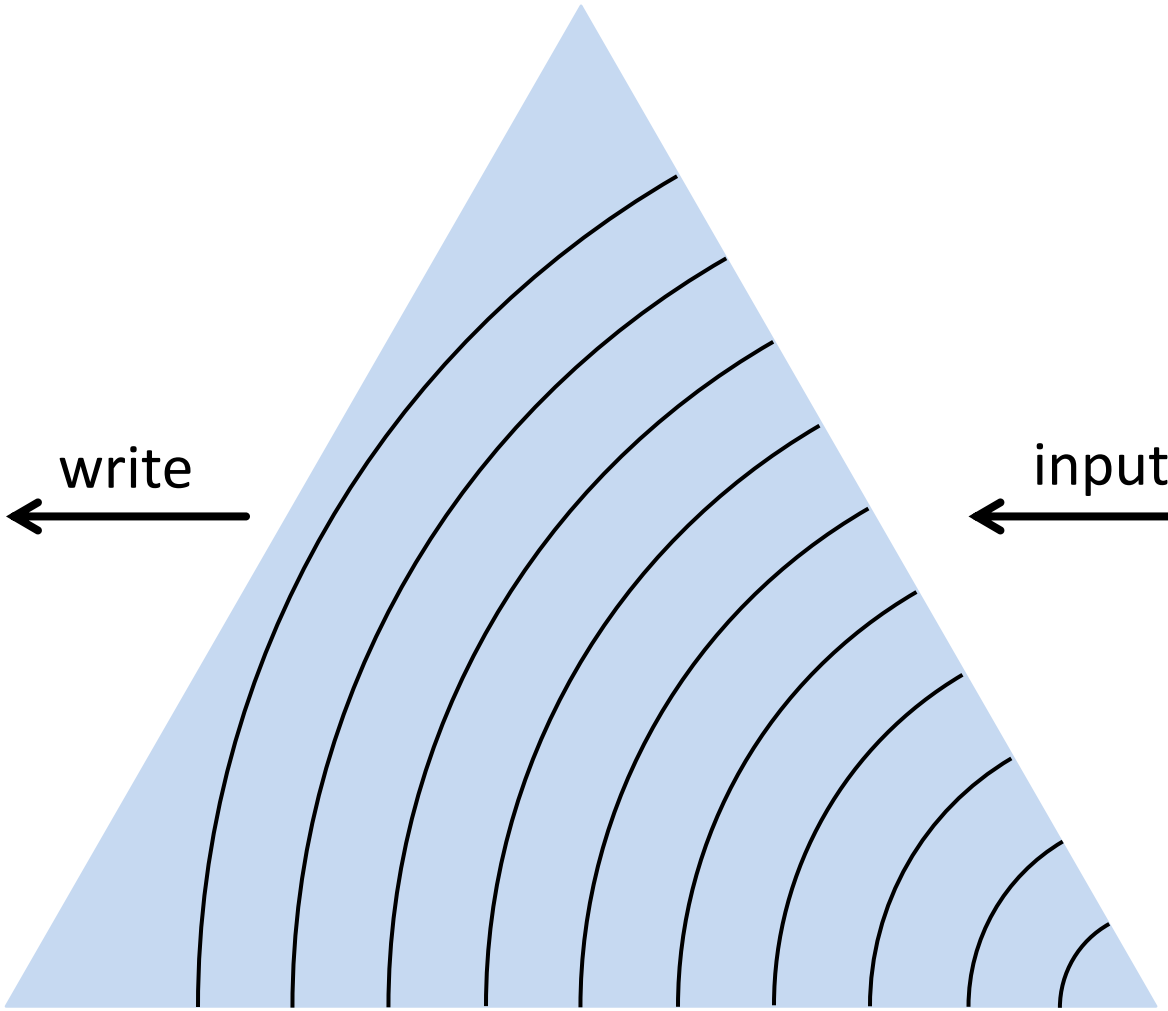
write



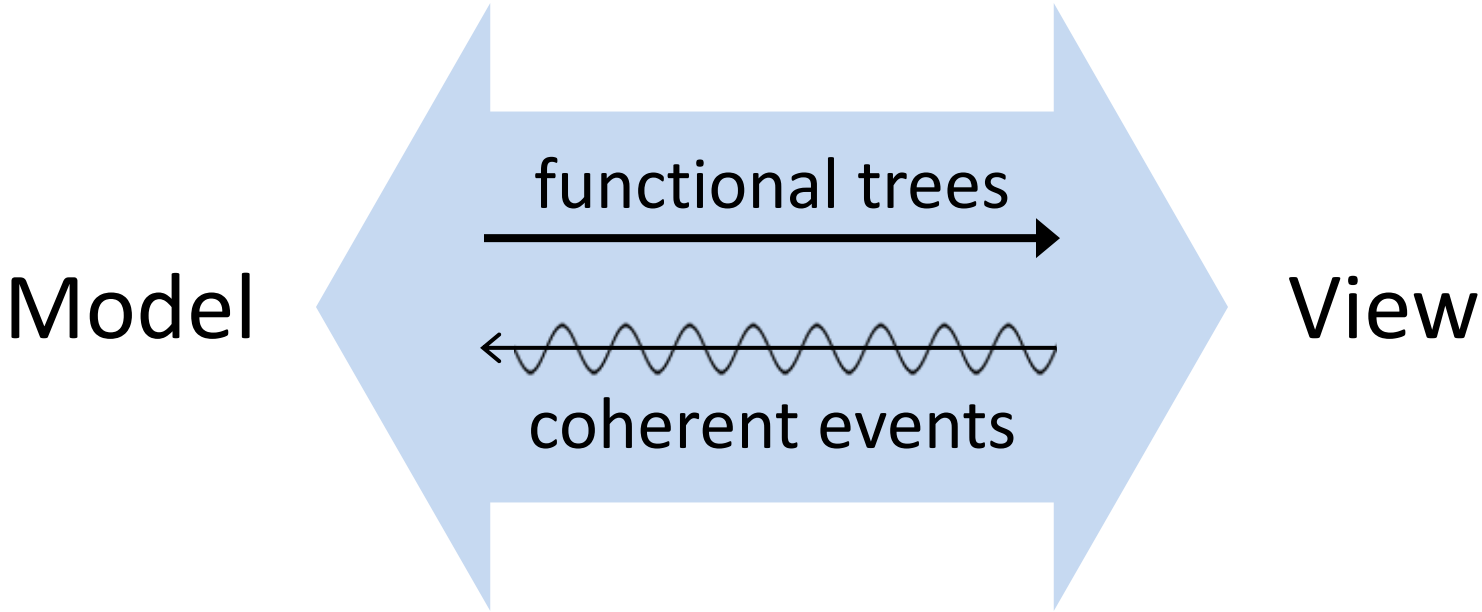
input

Solution: coherent events

write



input

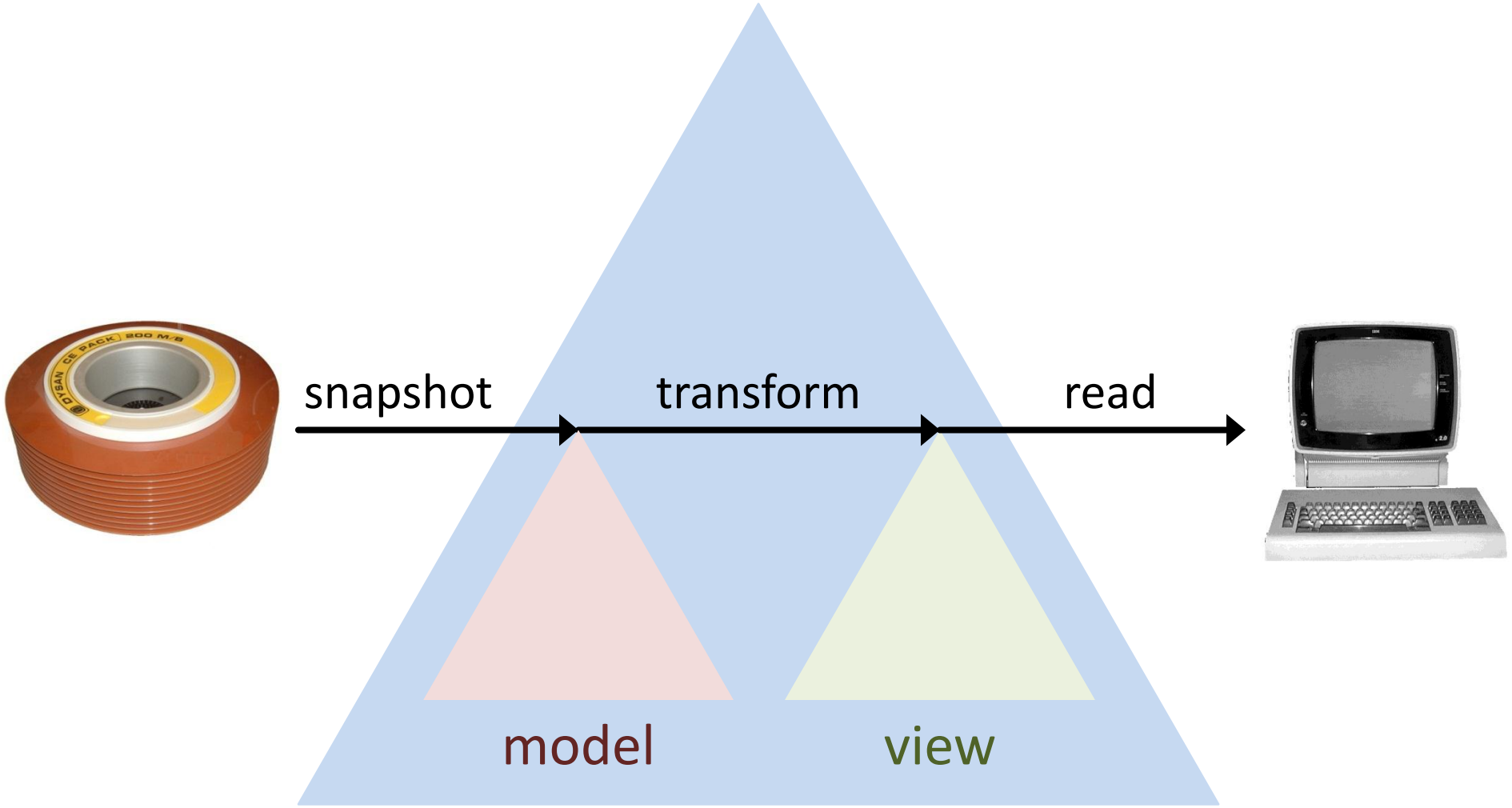

Model
functional trees
coherent events
View

Demo

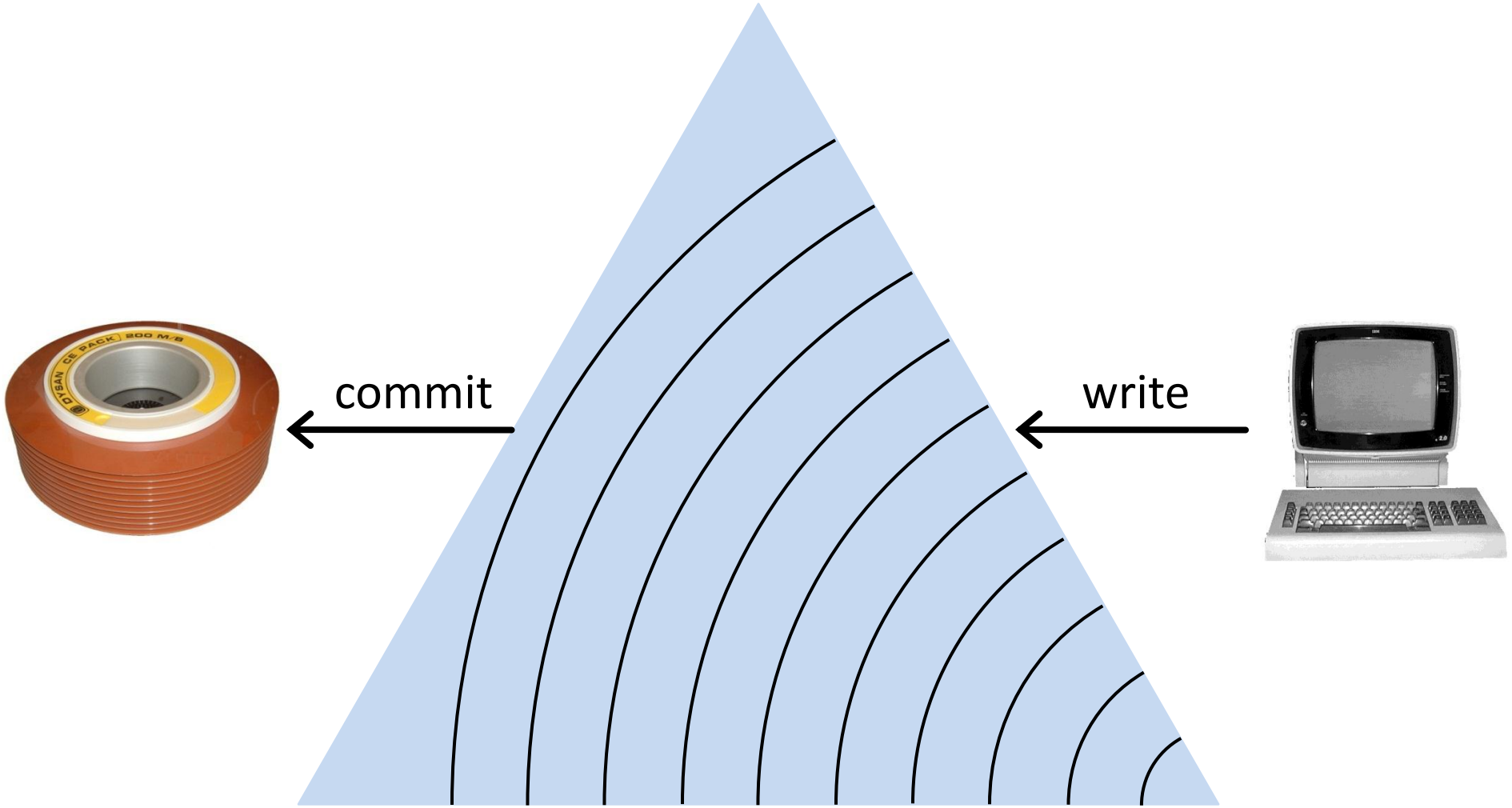
OYSAN CE PACK 200 M/B

TWO WAY

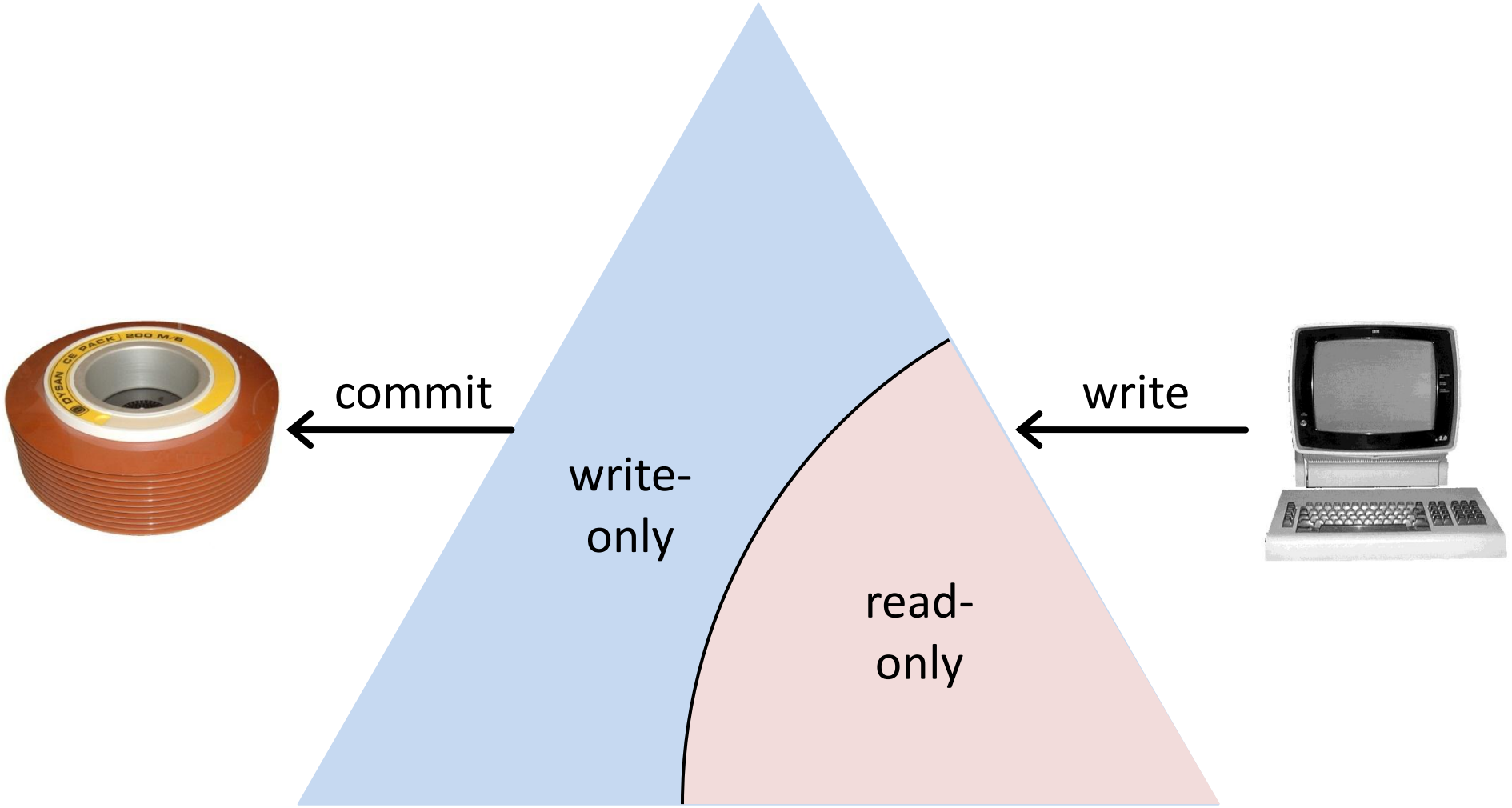
Output:
read-driven functional trees



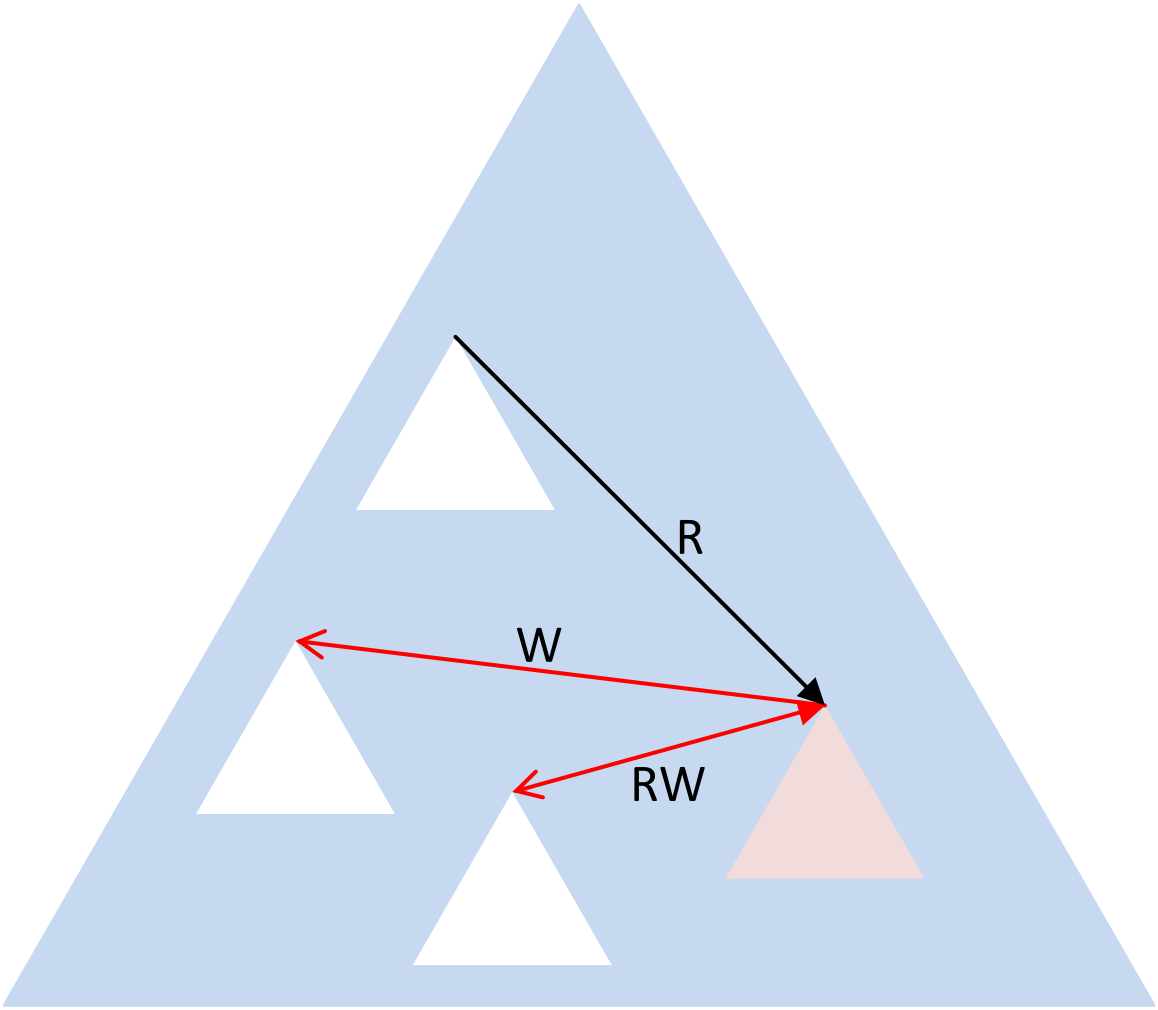
Input:
write-driven coherent events

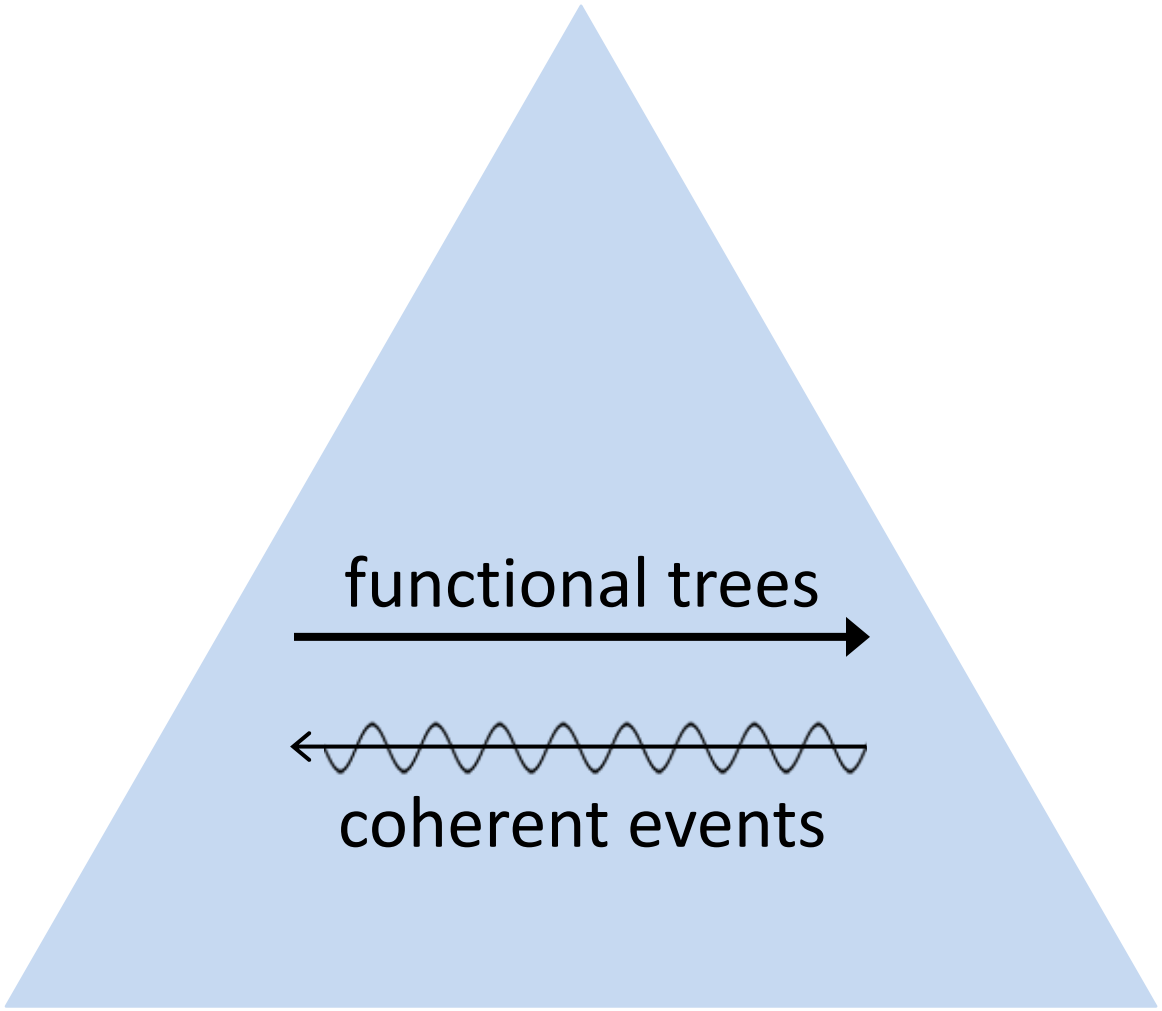


Input:
write-driven coherent events



Static effects




functional trees
coherent events

so what?

Compilers
The Art of Computer Programming
Sorting and Searching
The Art of Computer Programming
Seminumerical Algorithms
The Art of Computer Programming
Fundamental Algorithms
Dreamweaver MX
RUBY IN A NUTSHELL
The Ruby Programming Language
Agile Web Development with Rails
HTML & XHTML
The Definitive Guide
Core JavaServer Faces
An Introduction to Web Technologies
JavaScript: The Good Parts
JavaScript
The Definitive Guide
Concurrent Programming in Java
The Java Virtual Machine Specification, Second Edition
The Java Language Specification
Java Performance Tuning
Filthy Rich Clients
The JFC Swing Tutorial
Second Edition
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Program Development in Java
Liskov
Guttag
OBJECT-ORIENTED
SOFTWARE CONSTRUCTION
The Object Constraint Language
The Unified Modeling Language Reference Manual
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UNIX NETWORK PROGRAMMING
STEVENS
UNIX NETWORK PROGRAMMING
TCP/IP Illustrated, Volume 2
TCP/IP Illustrated, Volume 1
Stevens

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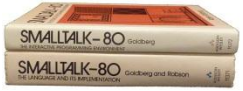
SMALLTALK-80
SMALLTALK-80