

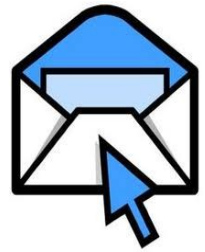
DDD with Actors



Vaughn Vernon

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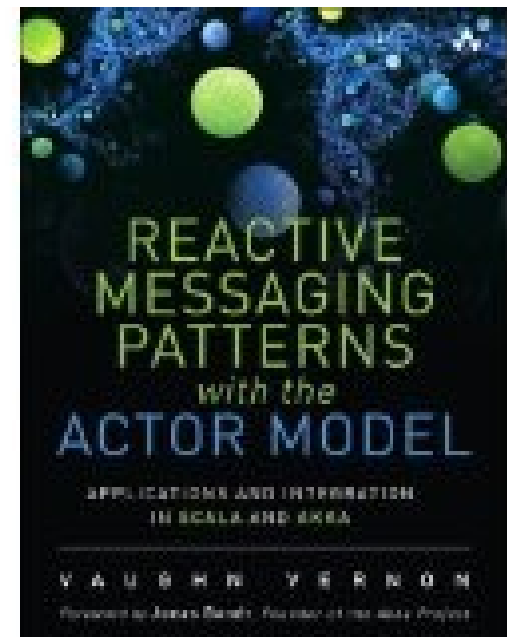
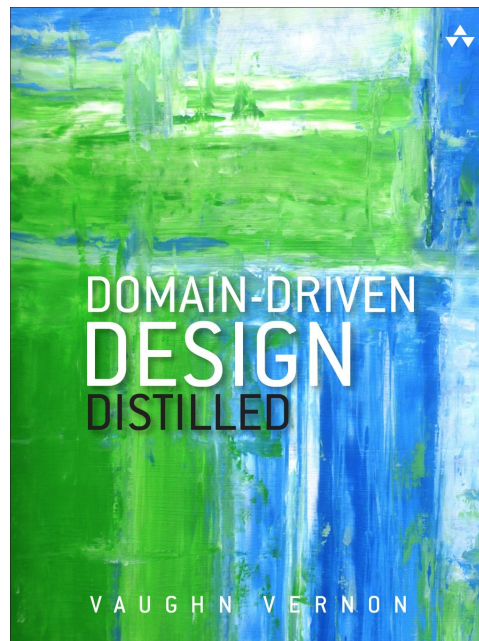
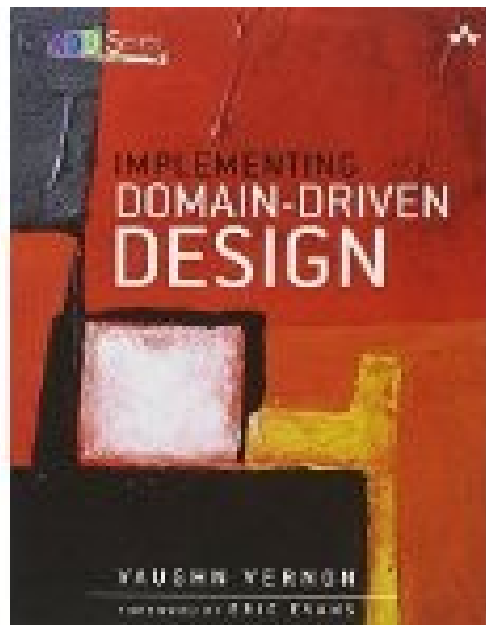


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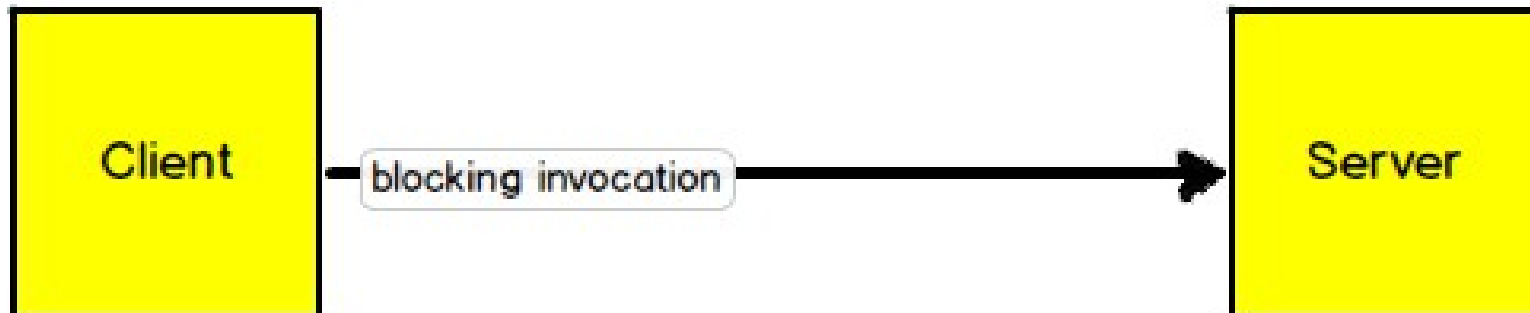
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Books



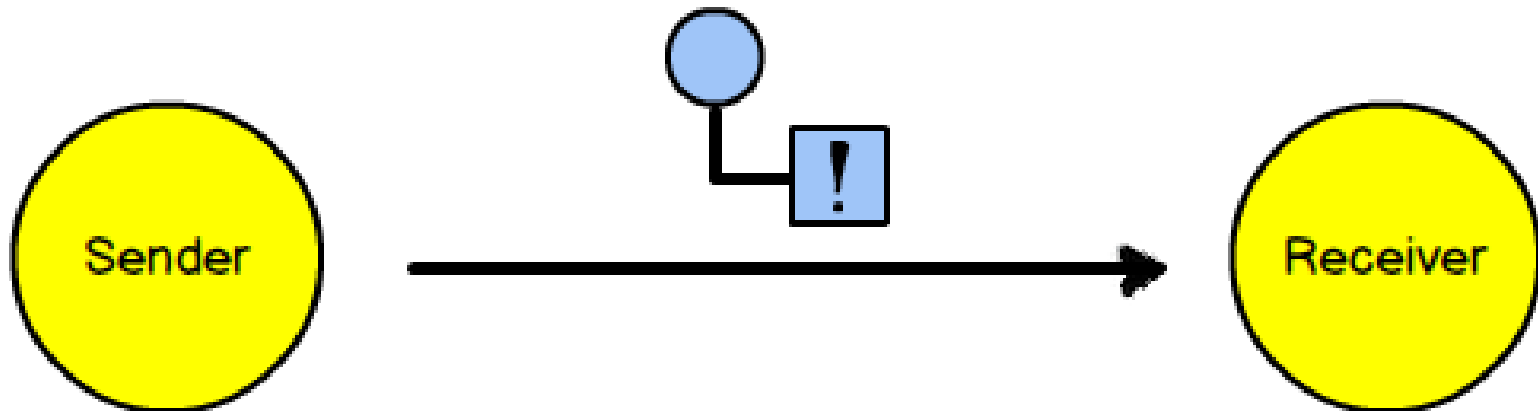
Objects

Blocking



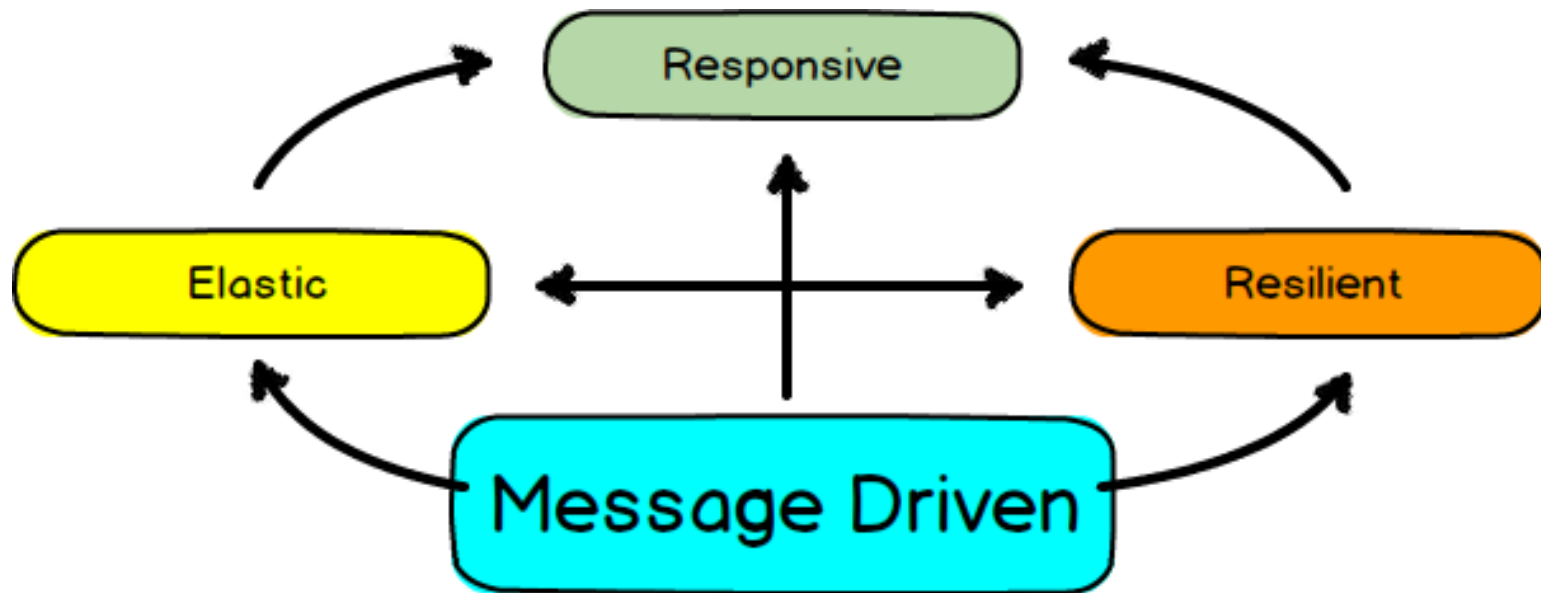
Actor Model

Message Driven



Alan Kay: “The big idea is messaging...”

Reactive Is

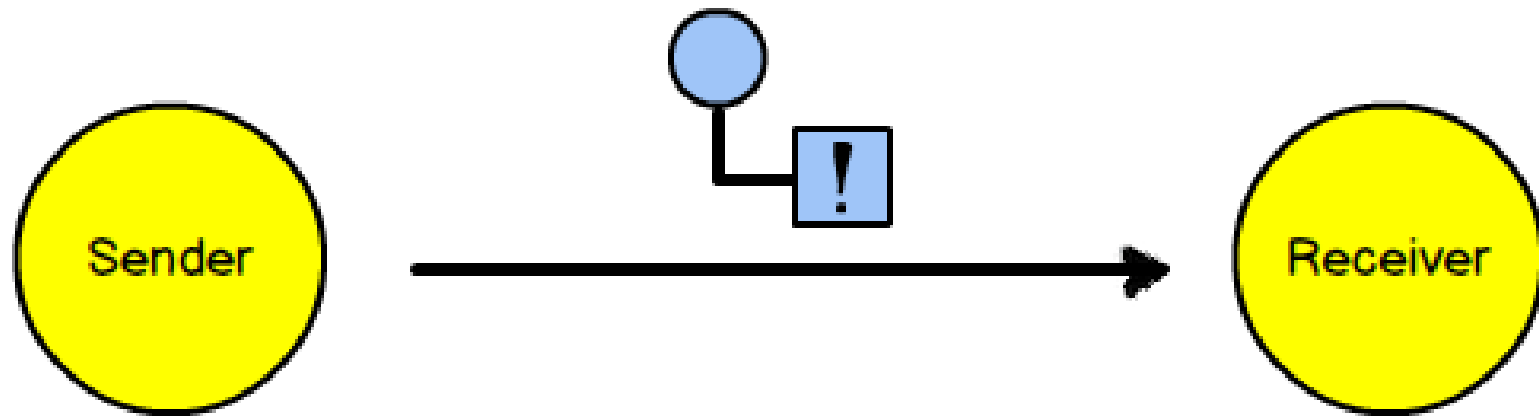


Did I Mention Cores?

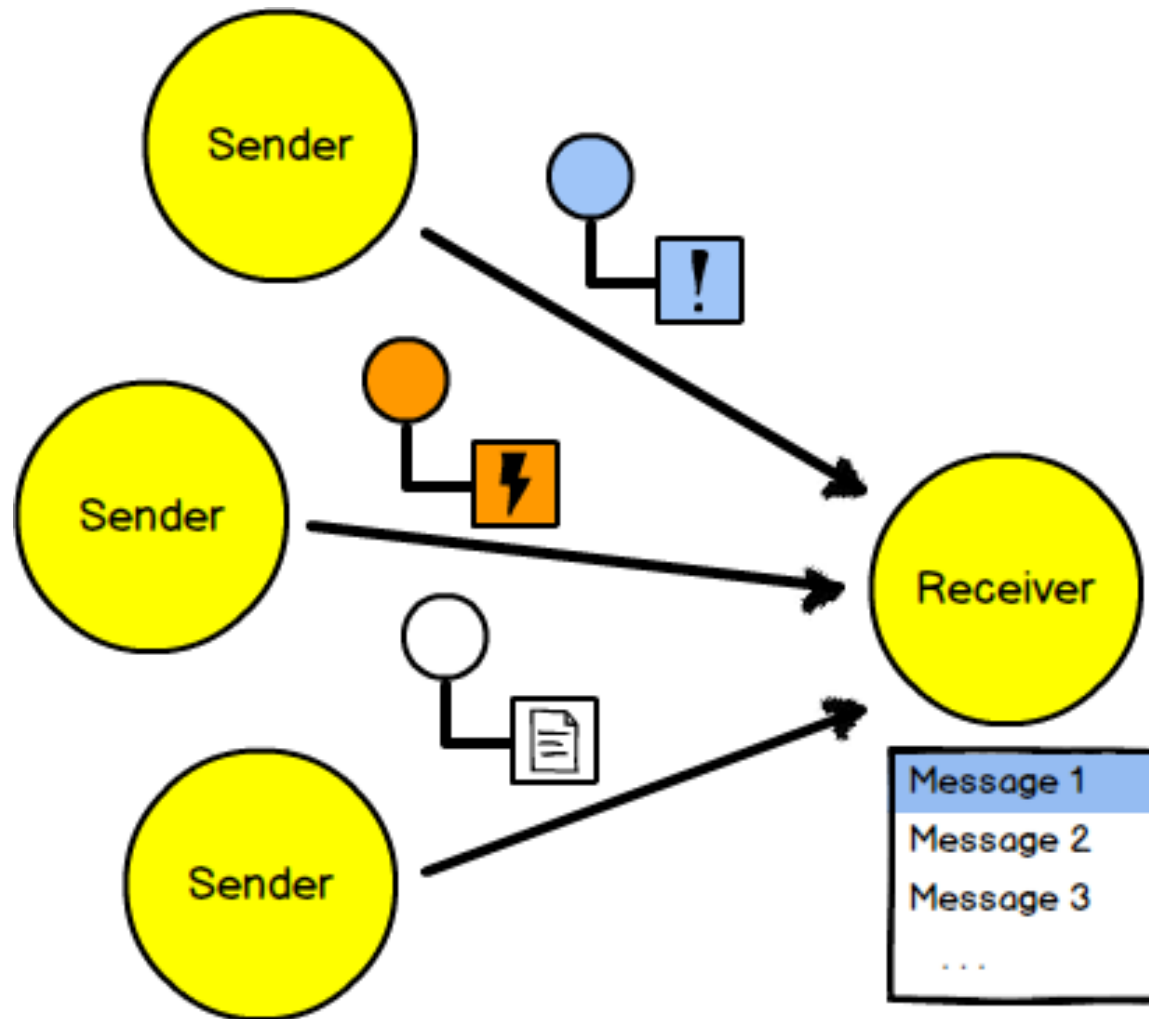


88 / 200+ cores with Xeon Phi co-processors

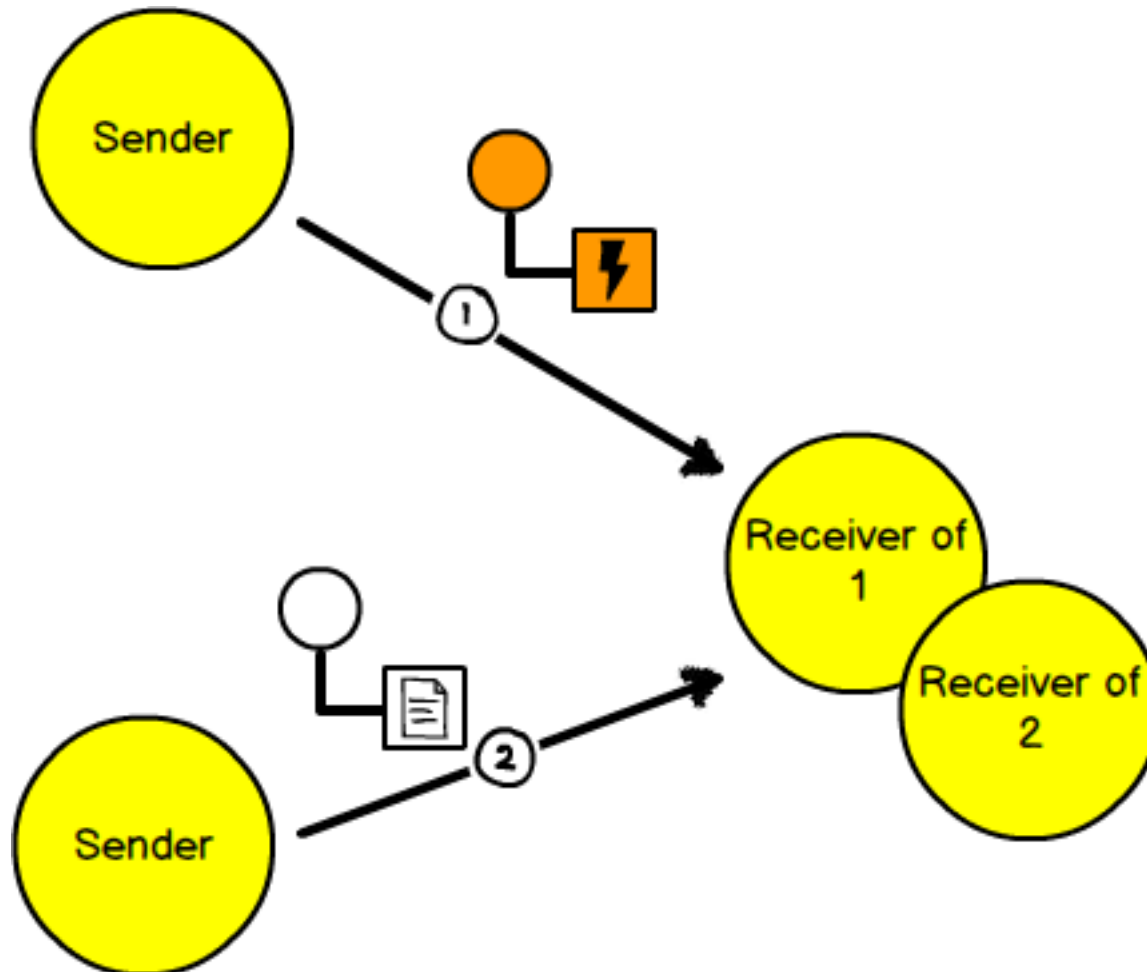
Direct Asynchronous Messaging



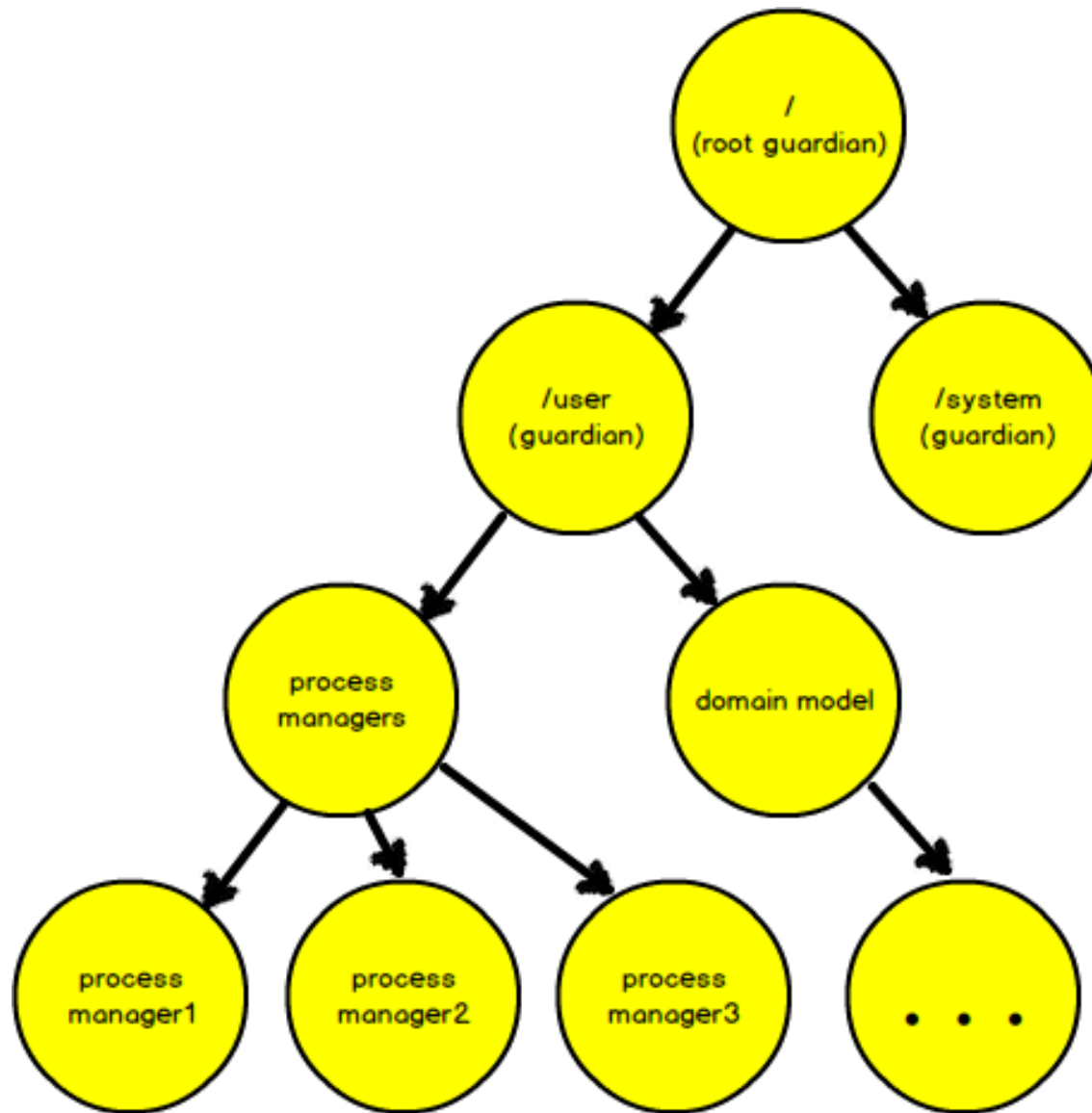
Lock-Free, Share Nothing



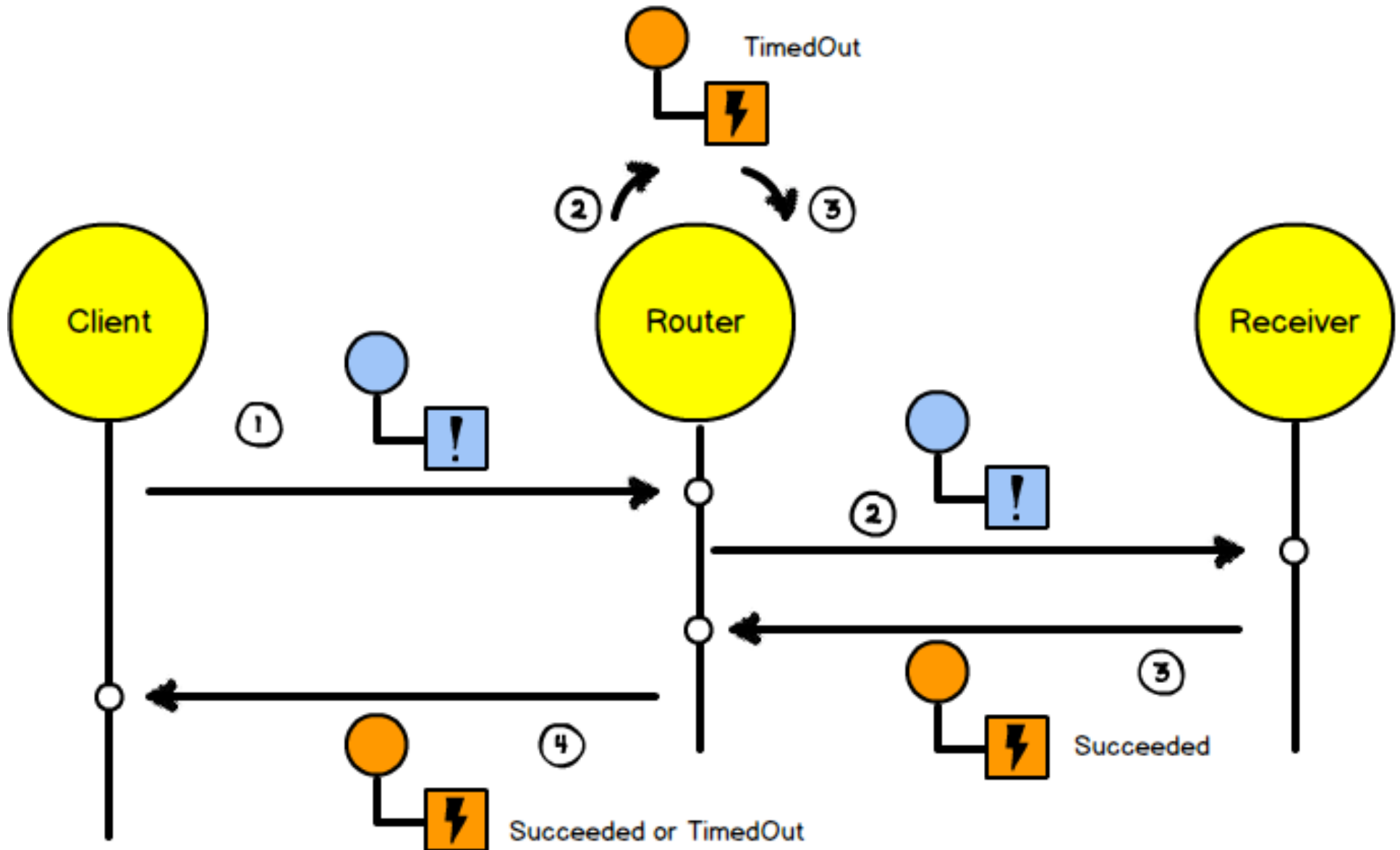
Become: Prepare for Next Message



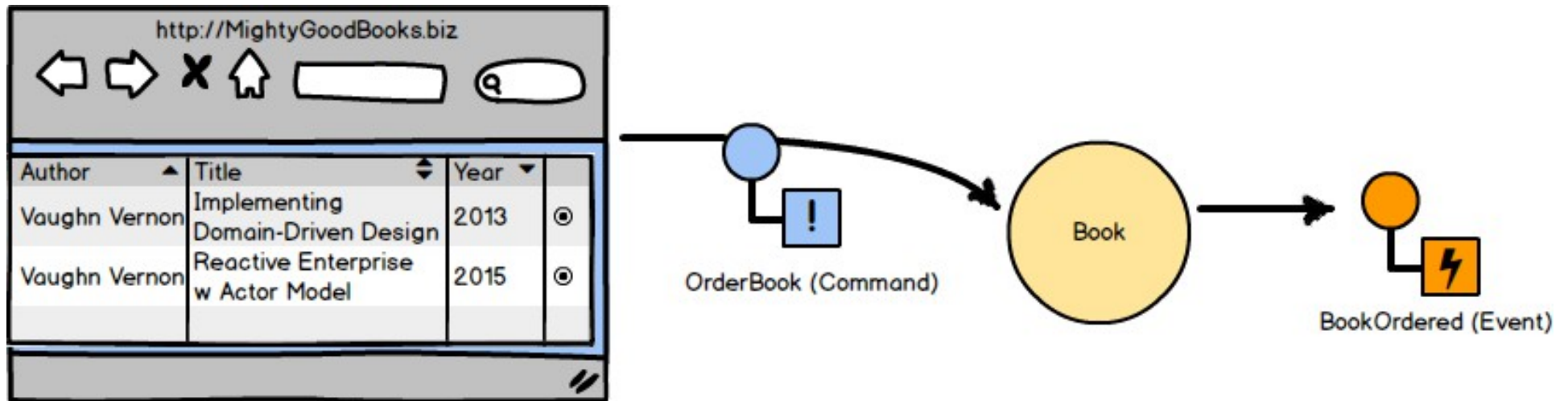
Actor System



Actor Concurrency



Simplicity Stack



How Many Actors?

50+

100+

1,000,000+

Actors and DDD

Alan Kay: “The Actor model retained more of what I thought were the good features of the object idea.”

Alan Kay: “The big idea is messaging...”

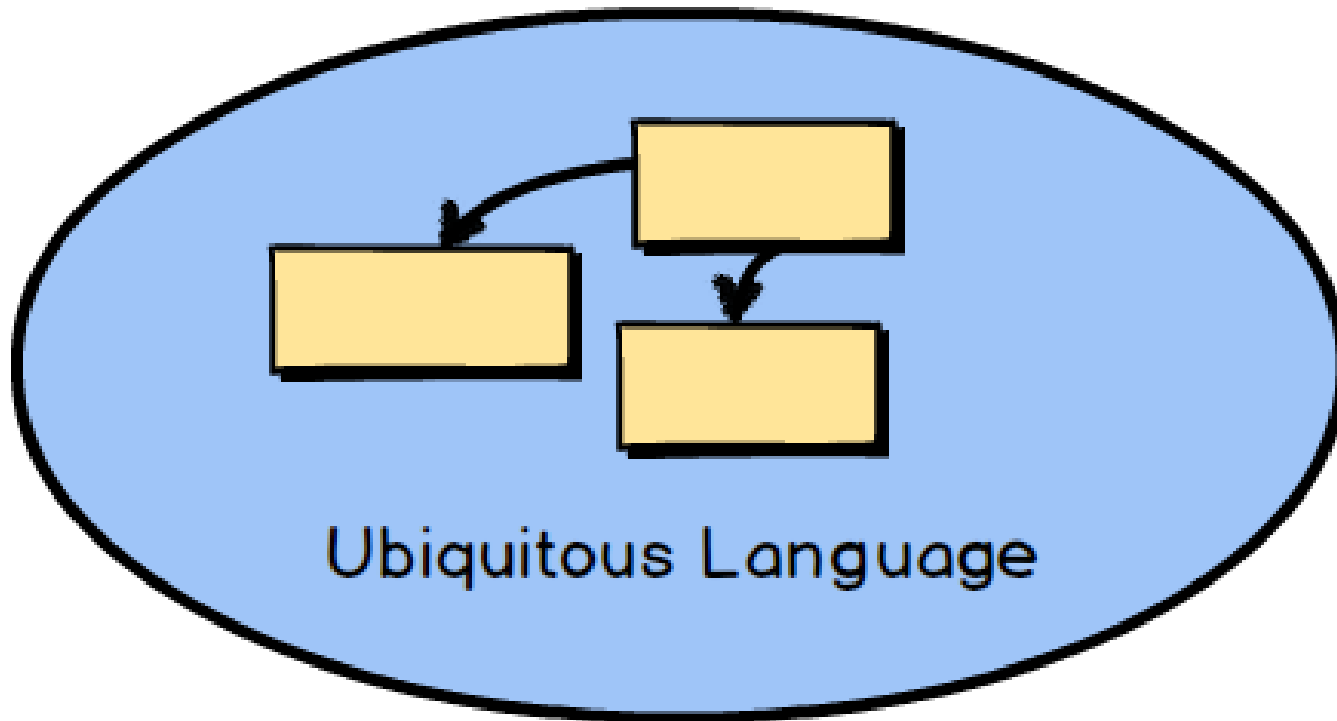
Responding to Rapid New Business Direction

**DDD enables necessary
knowledge crunching**

**Actors and messages enables
rapid implementation and
clear understanding**

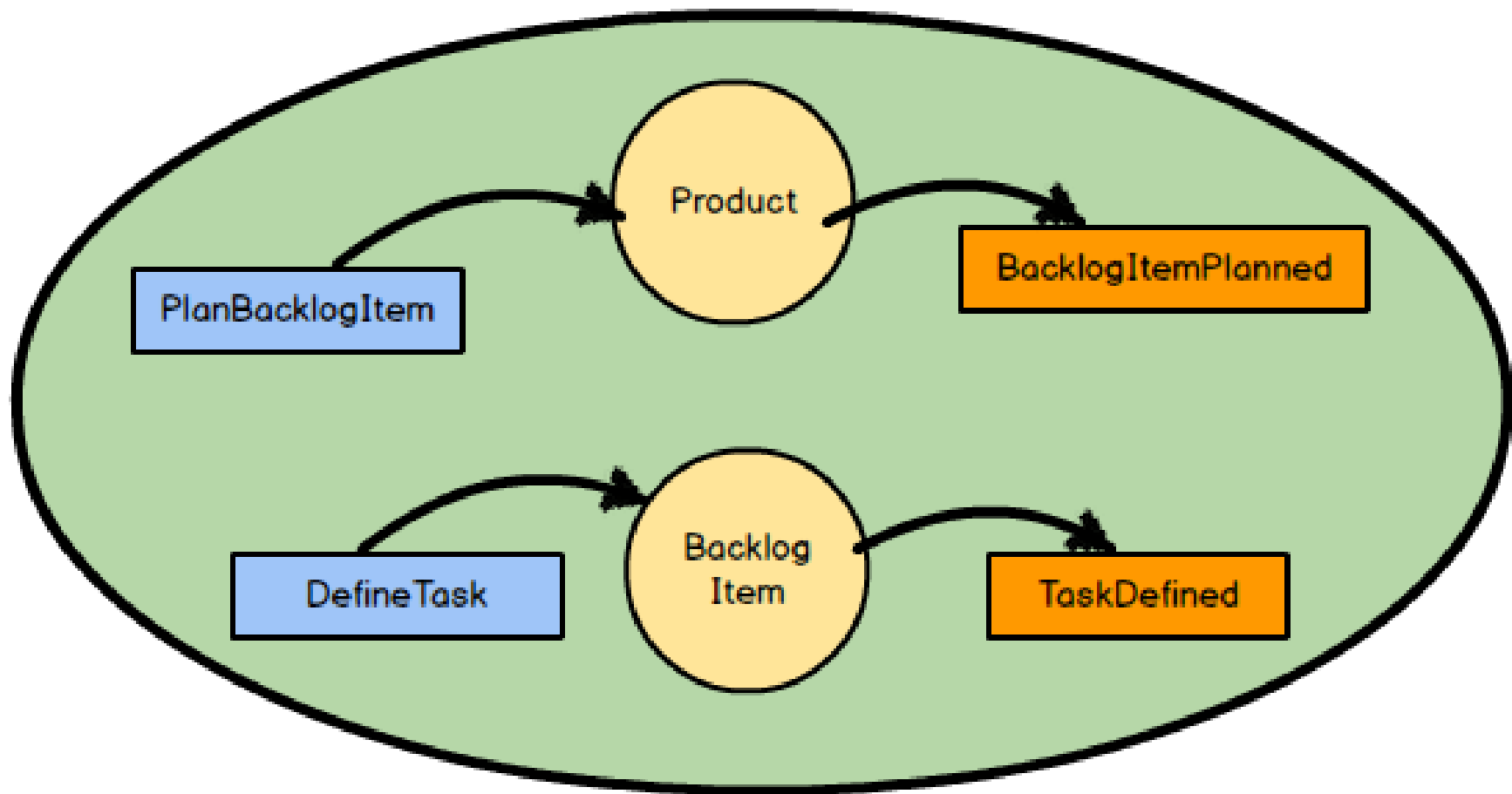
Essence of DDD

Bounded Context

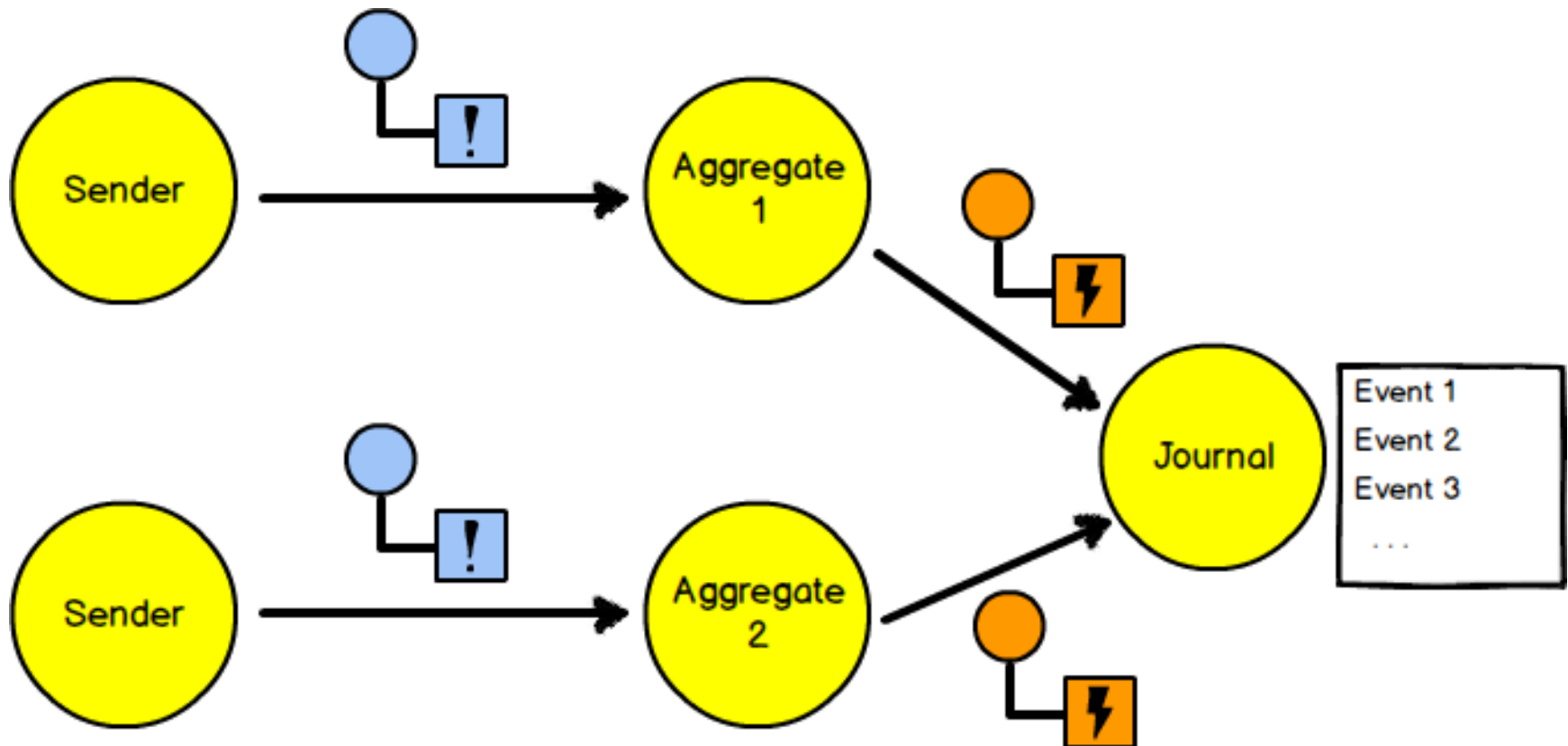


Ubiquitous Language

As Actors and messages...



Aggregates

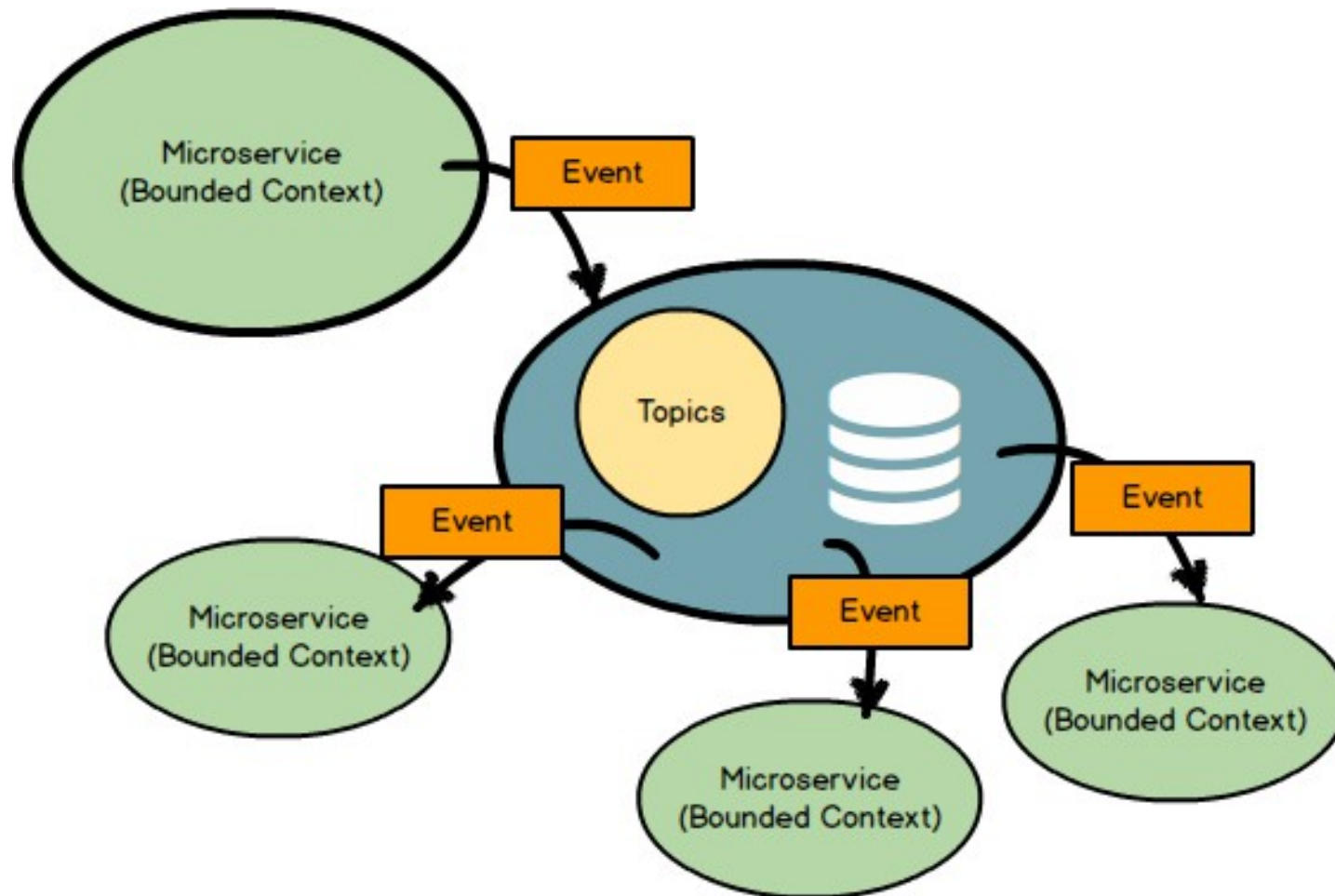


Transactional Consistency Boundary

Aggregate Implementation

- Immutable state object/record
- Transition and replace state
upon command
- Emit corresponding event

Events Everywhere



Event Storming

—————> Time —————>



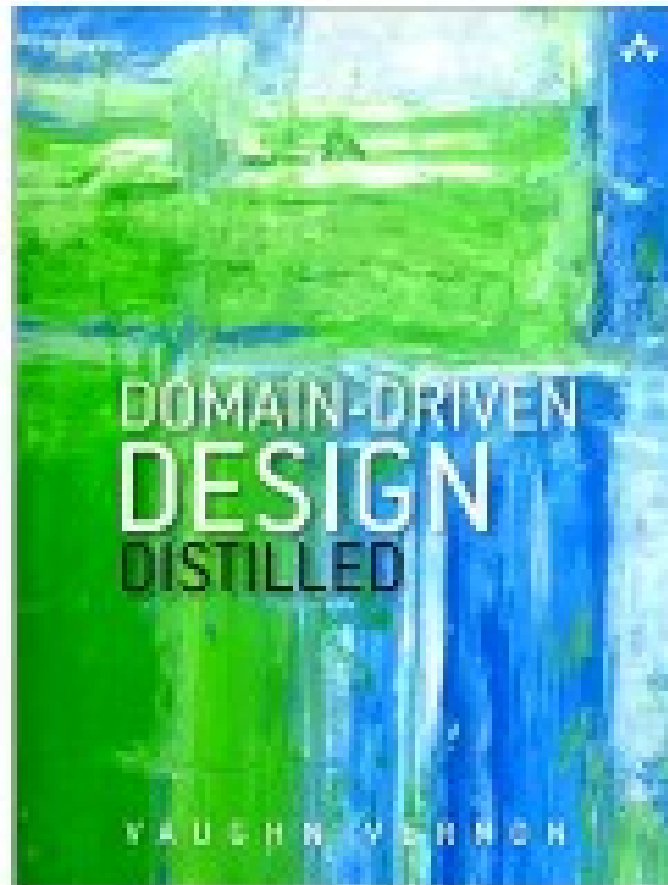
Use design-level storming

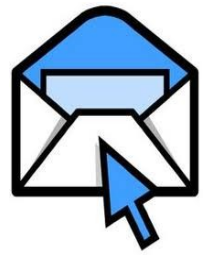
Actor Model

Implementations

- Akka (Scala/Java)
- Akka.NET (C#/F#)
 - Erlang & Elixir

DDD Distilled





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