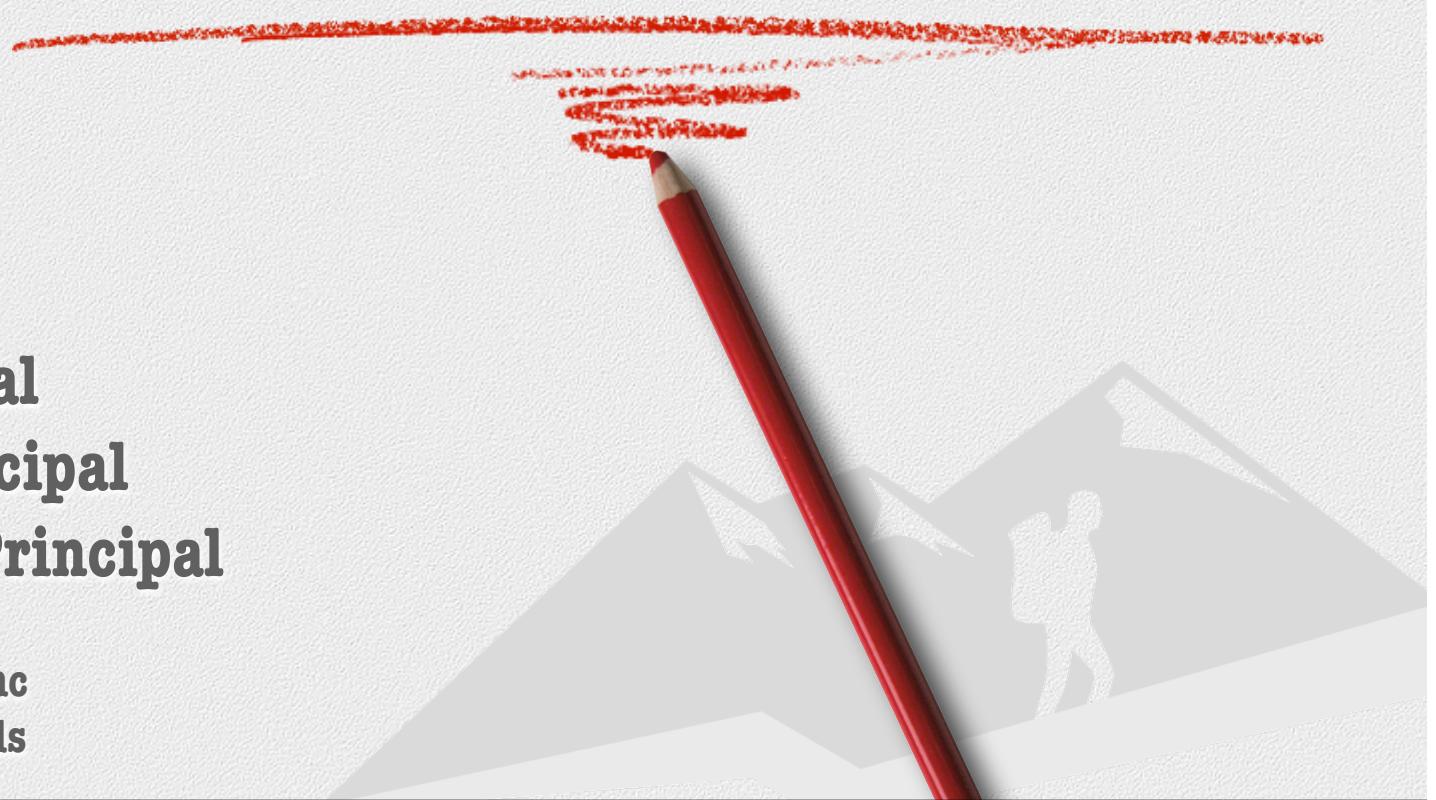




StonePath:

an Introduction

State/Task Workflow for Rails



David Bock, Principal

Karen Gillison, Principal

Kim MacCormack, Principal

<http://www.codesherpas.com>

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Who Is This Guy?

- Spent 11 years writing Java-based Workflow apps for the U.S. State Department
 - Tracking the Removal of Landmines in Bosnia
 - Tracking the Licensing/Import/Export of Nuclear/Military/Biological/Dual-Use Materials Around the World
- Recently built workflow apps for ‘other major clients’
- <http://www.twitter.com/bokmann>



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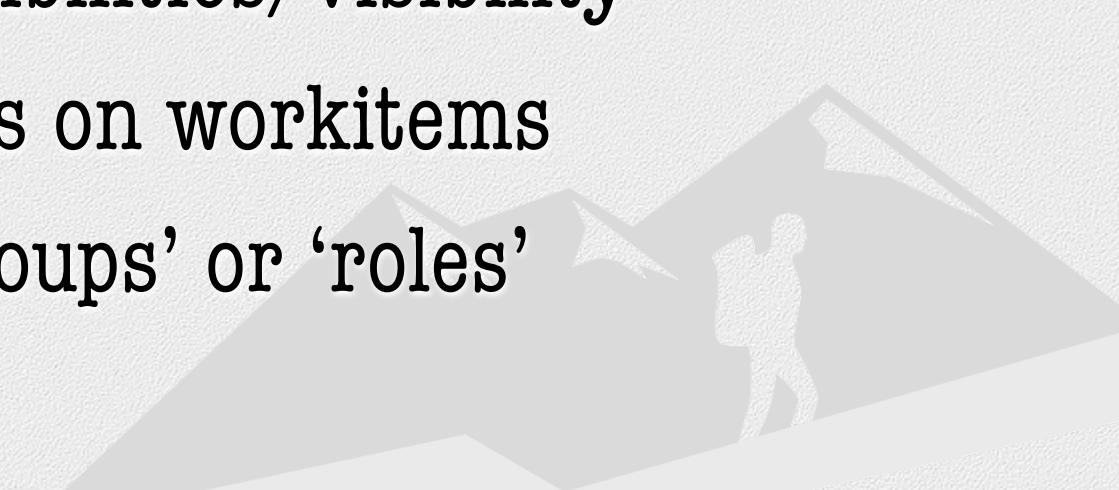
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David Bock

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What is “Workflow”

- Long-lived business processes
 - Multiple users/actions towards a common goal
 - Actions are sequential/concurrent depending on model
 - Users have responsibilities/visibility
 - Users perform tasks on workitems
 - Users may have ‘groups’ or ‘roles’
- 



What is not “Workflow”

- Page Flow
- Step-by-step Wizards
- A series of disjoint, unrelated tasks
- Your job description
- State Machines (but its a good start)
- Ticketing Systems
- Content Management Systems (although they may have workflow features)



*The essence of workflow:
structured collaboration.
several people working
together towards a
common goal.*





What is StonePath?

- The name of this particular ‘brand’ of State/Task workflow modeling
 - Naming conventions
 - Business interview techniques
 - Conventions for accounting for time
 - Common vocabulary
- The name of the reference implementation
 - A rubygem for Rails
 - Extracted from real-world project(s)
 - Provides DSL and generators
 - <http://github.com/bokmann/stonepath>



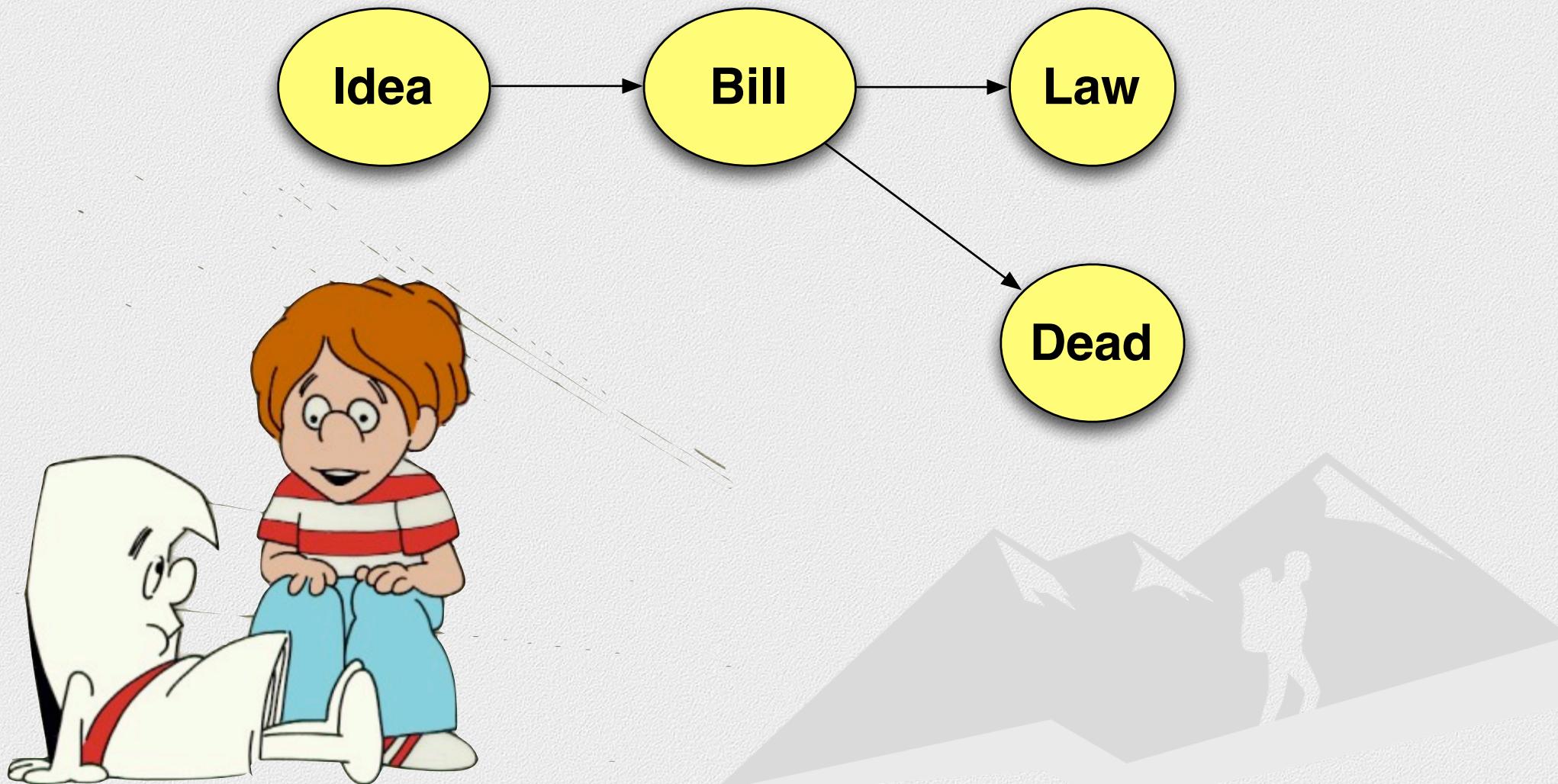


State-Based Workflow



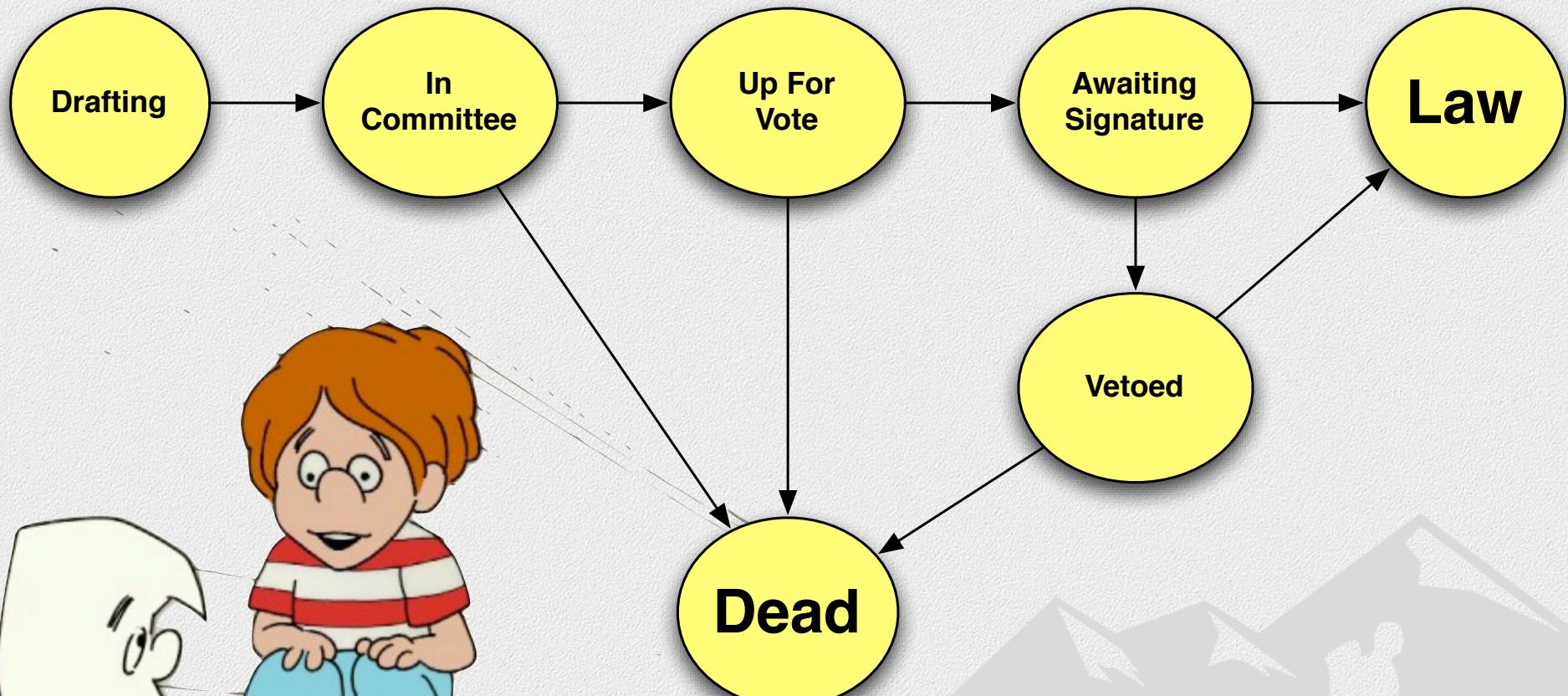


State-Based Workflow



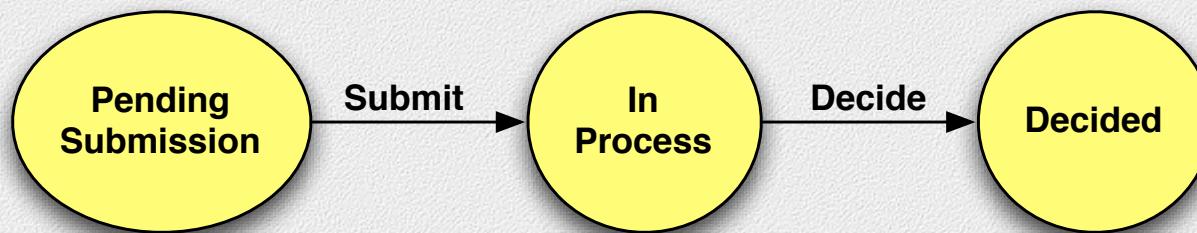


State-Based Workflow



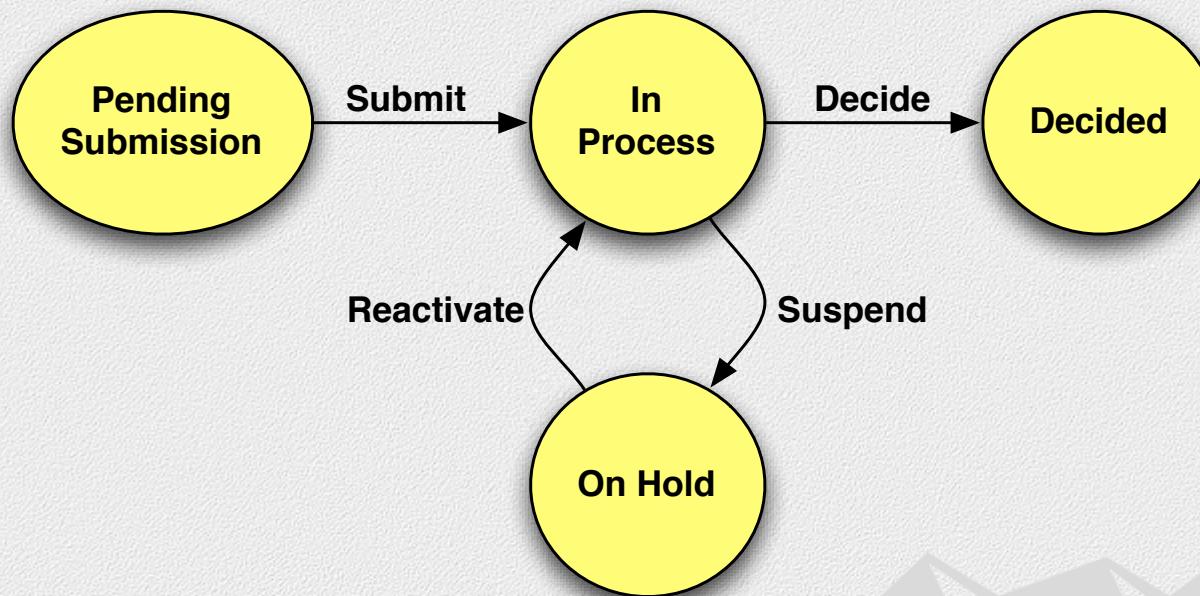


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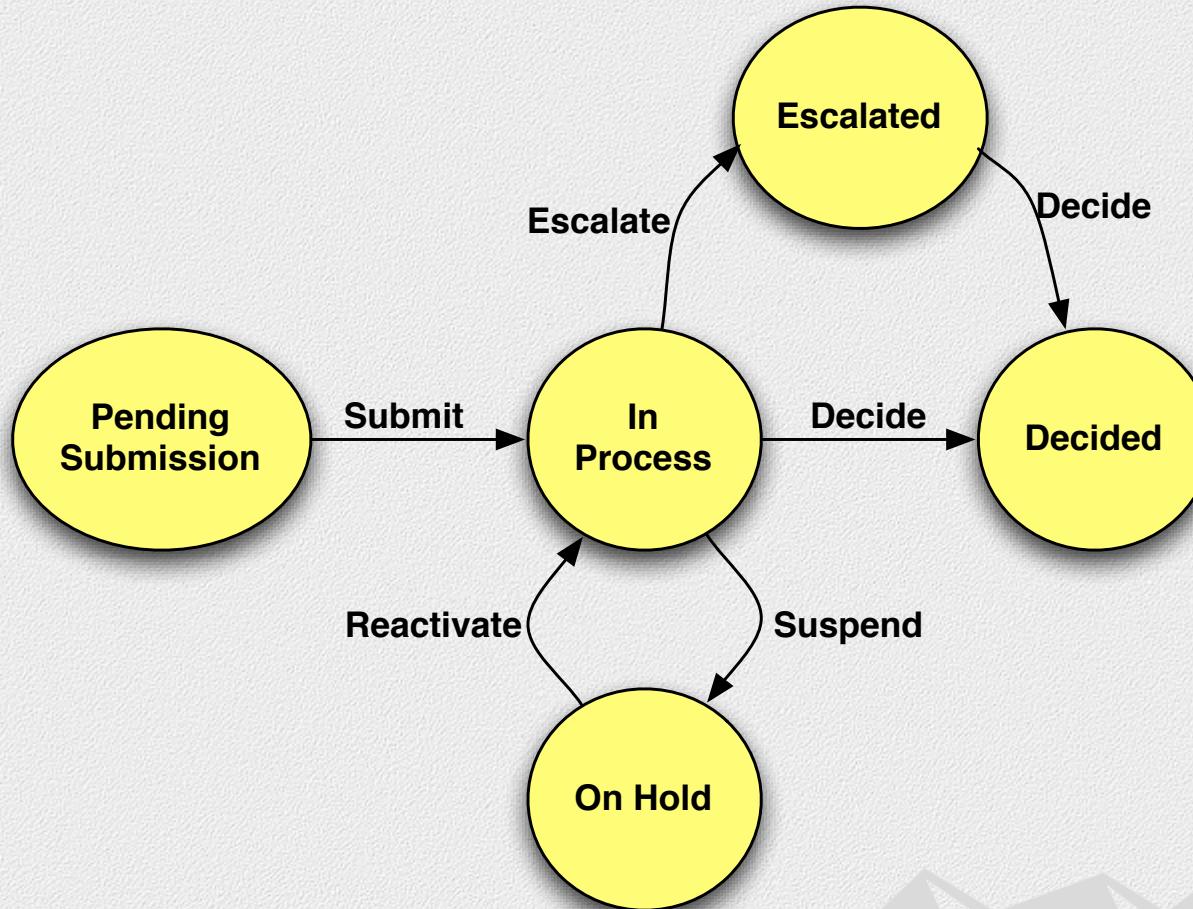


State-Based Workflow



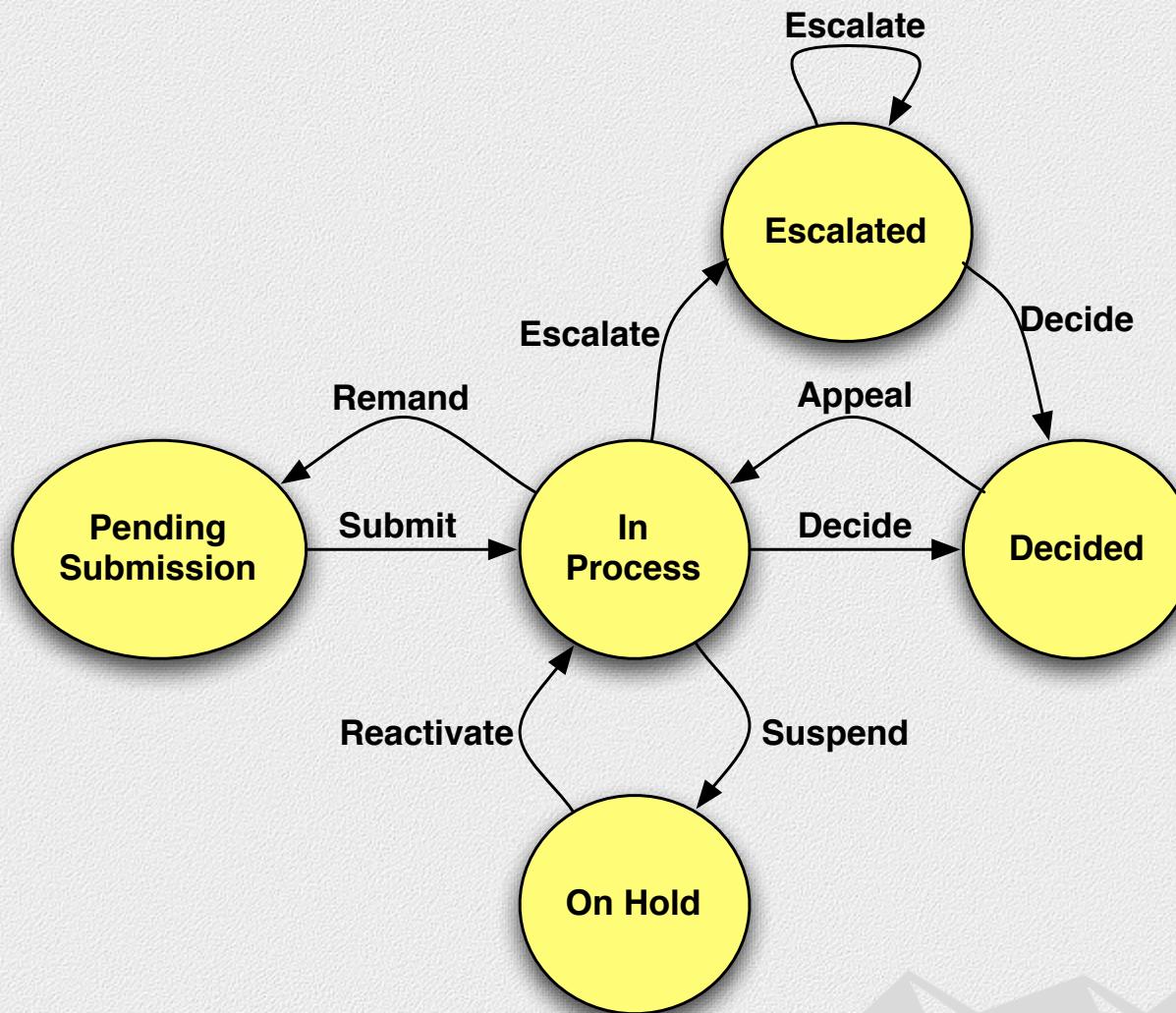


State-Based Workflow





State-Based Workflow





State-Based Workflow



- The “WorkItem”
- The “thing” people are collaborating over
- “Anthropomorphize the Work Item”
- “Your Boss’ Boss”
- Has state
- Has an ‘owner’



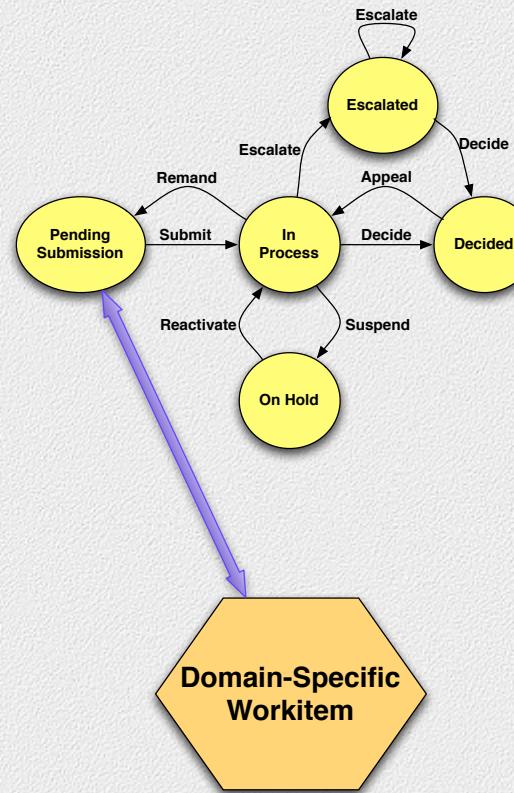
State-Based Workflow

- The “WorkBench”
 - An ‘in box’ metaphor
 - The ‘owner’ of WorkItems
 - Often changes when the WorkItem state changes



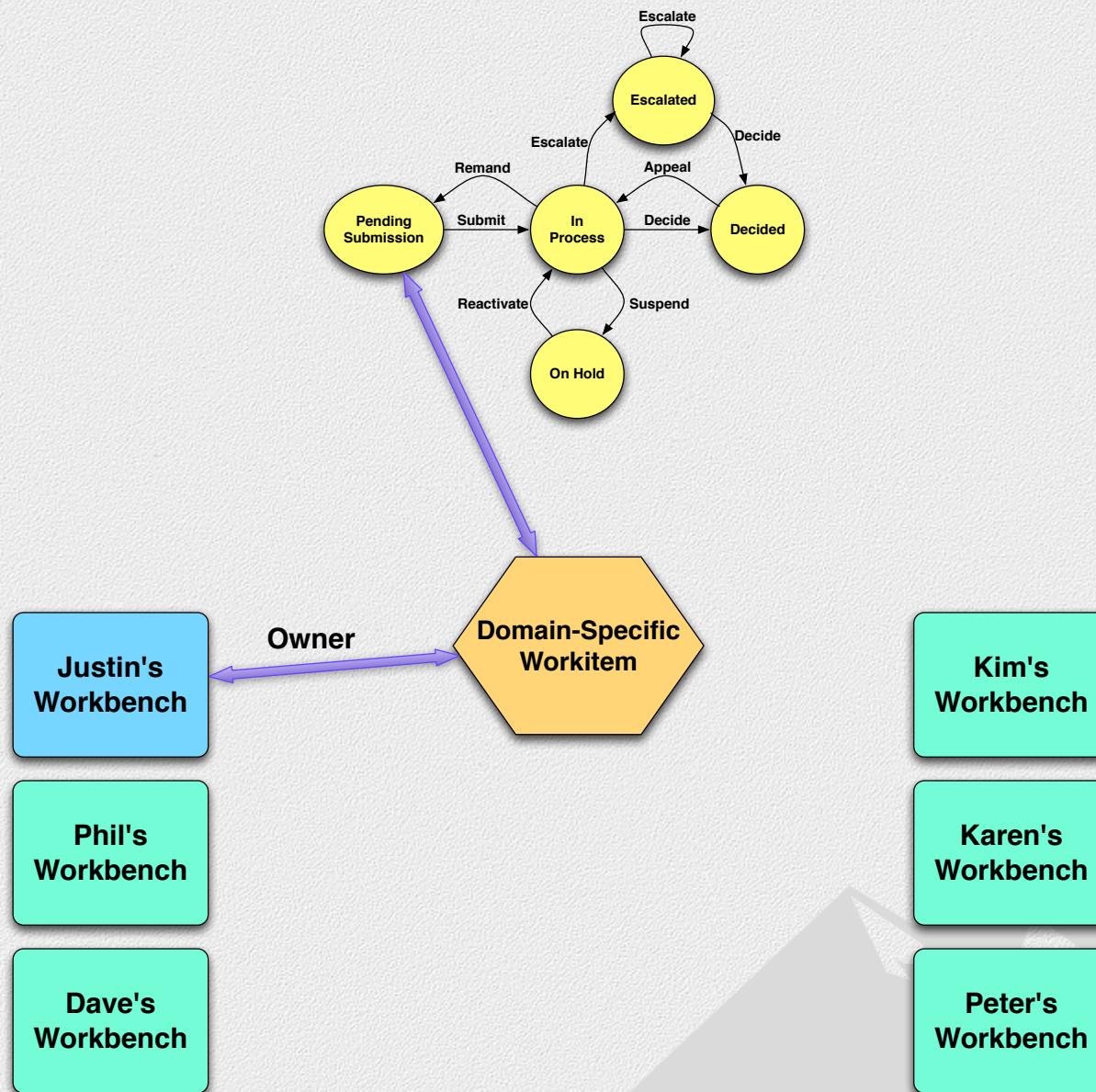


State-Based Workflow



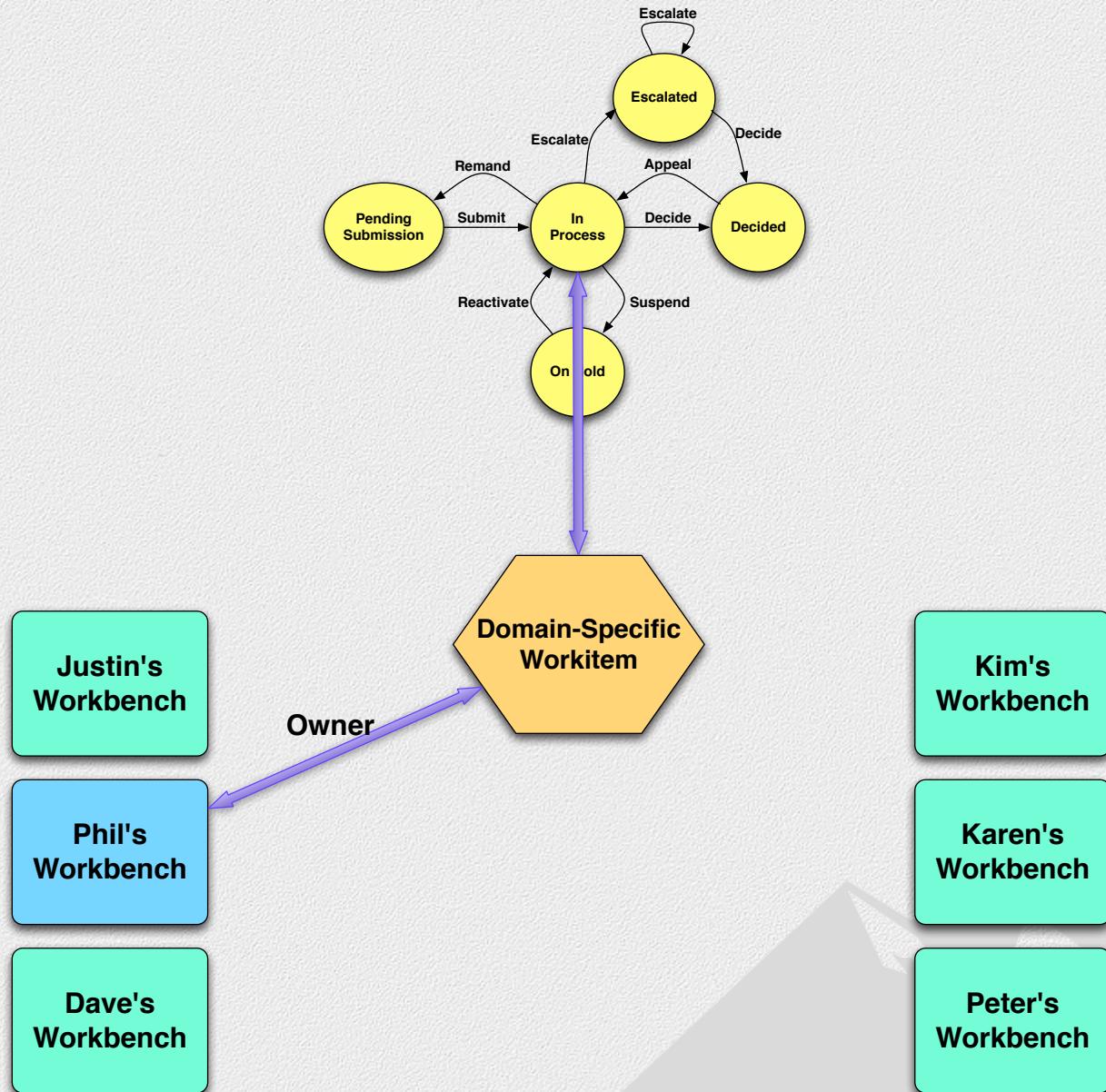


State-Based Workflow



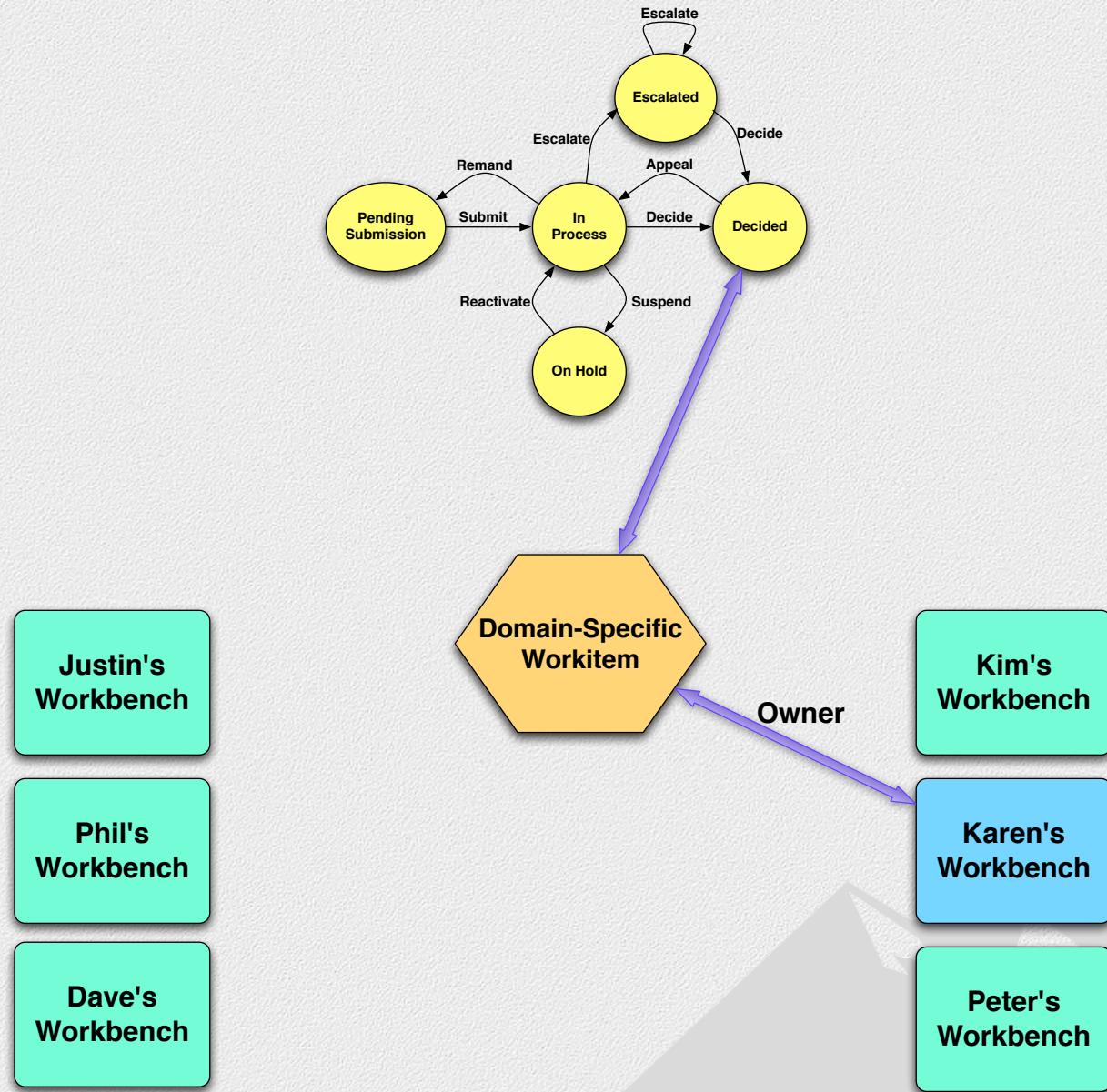


State-Based Workflow





State-Based Workflow





State-Based Workflow





State-Based Workflow

- WorkItem, State Machine and Workbench
 - Give us strict, linear workflows
 - Workflow can have branch points
 - Workflow can have guards
 - Observers can trigger behavior on entry/exit of States
 - Doesn't support concurrent work well...

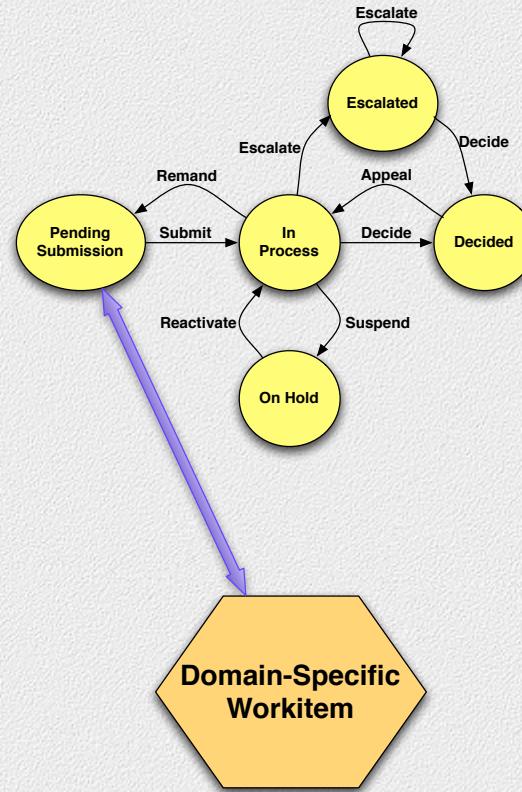


State-Based Workflow

- The “Task”
 - Association between WorkItem and WorkBench
 - Many can exist concurrently
 - Often has a ‘due date’ and ‘instructions’
 - Has its own, small state machine
 - (in process, cancelled, completed, etc).
 - Lifecycle often (but not necessarily) tied to state of WorkItem

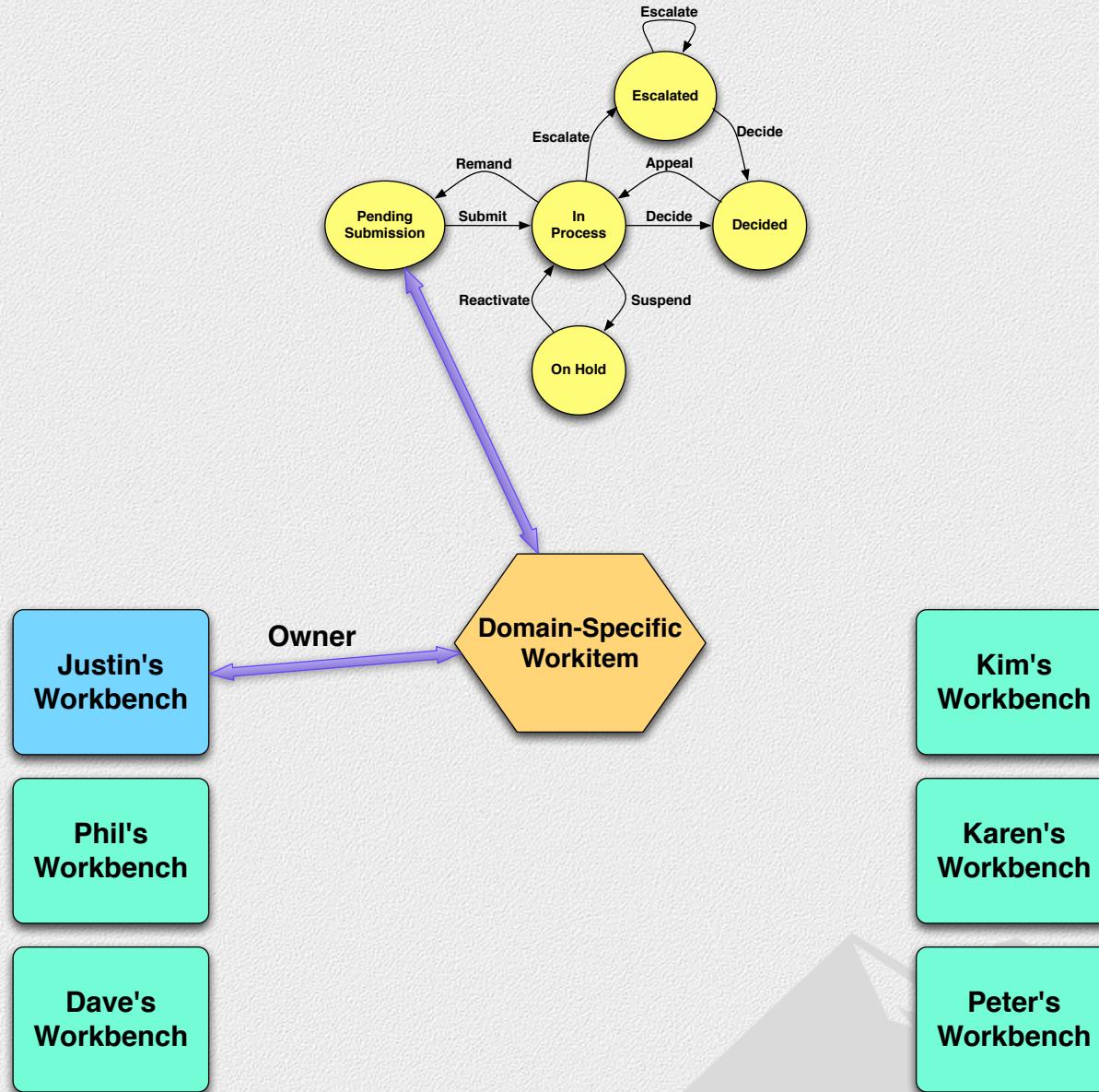


State-Based Workflow

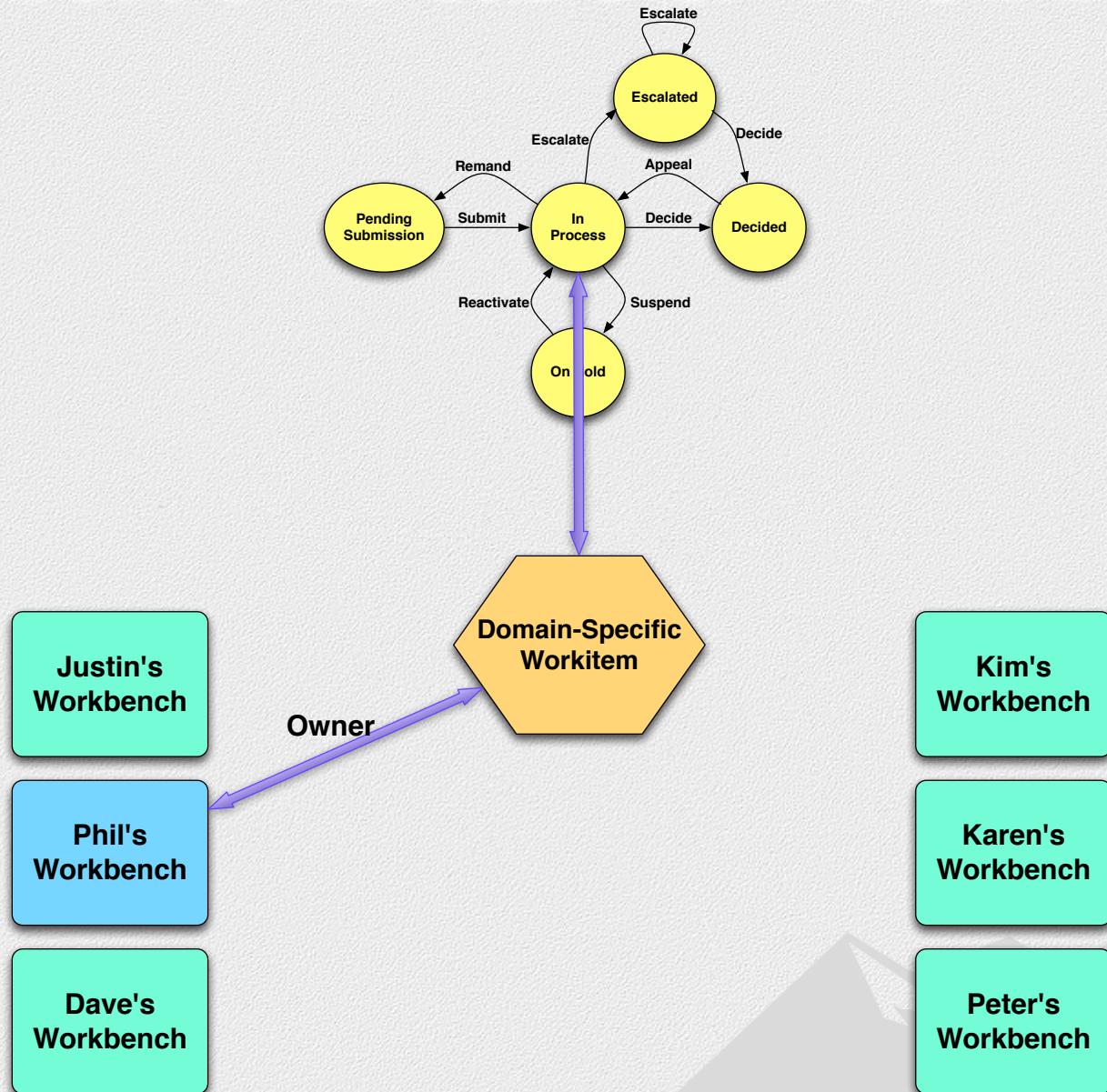




State-Based Workflow

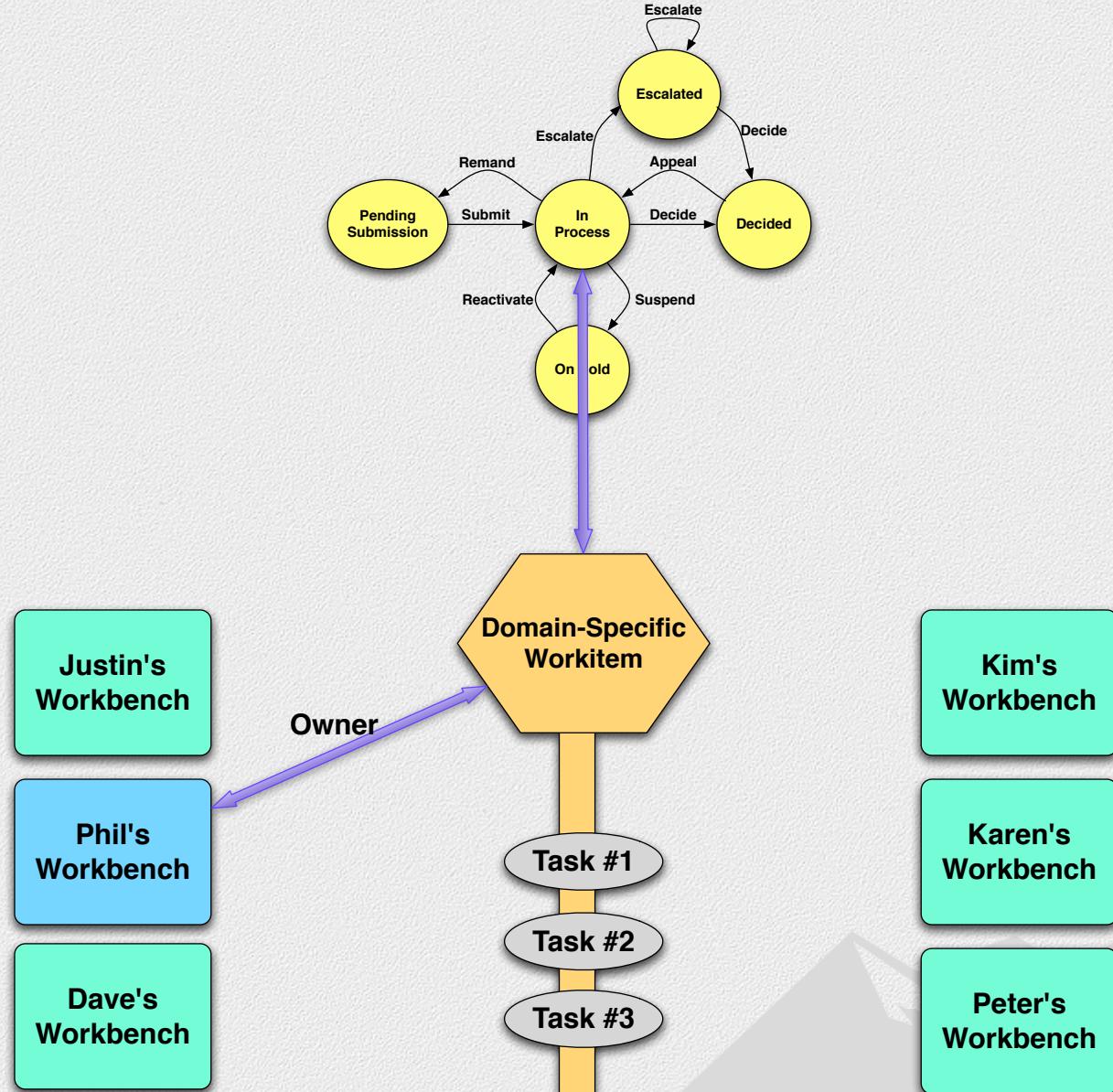


State-Based Workflow

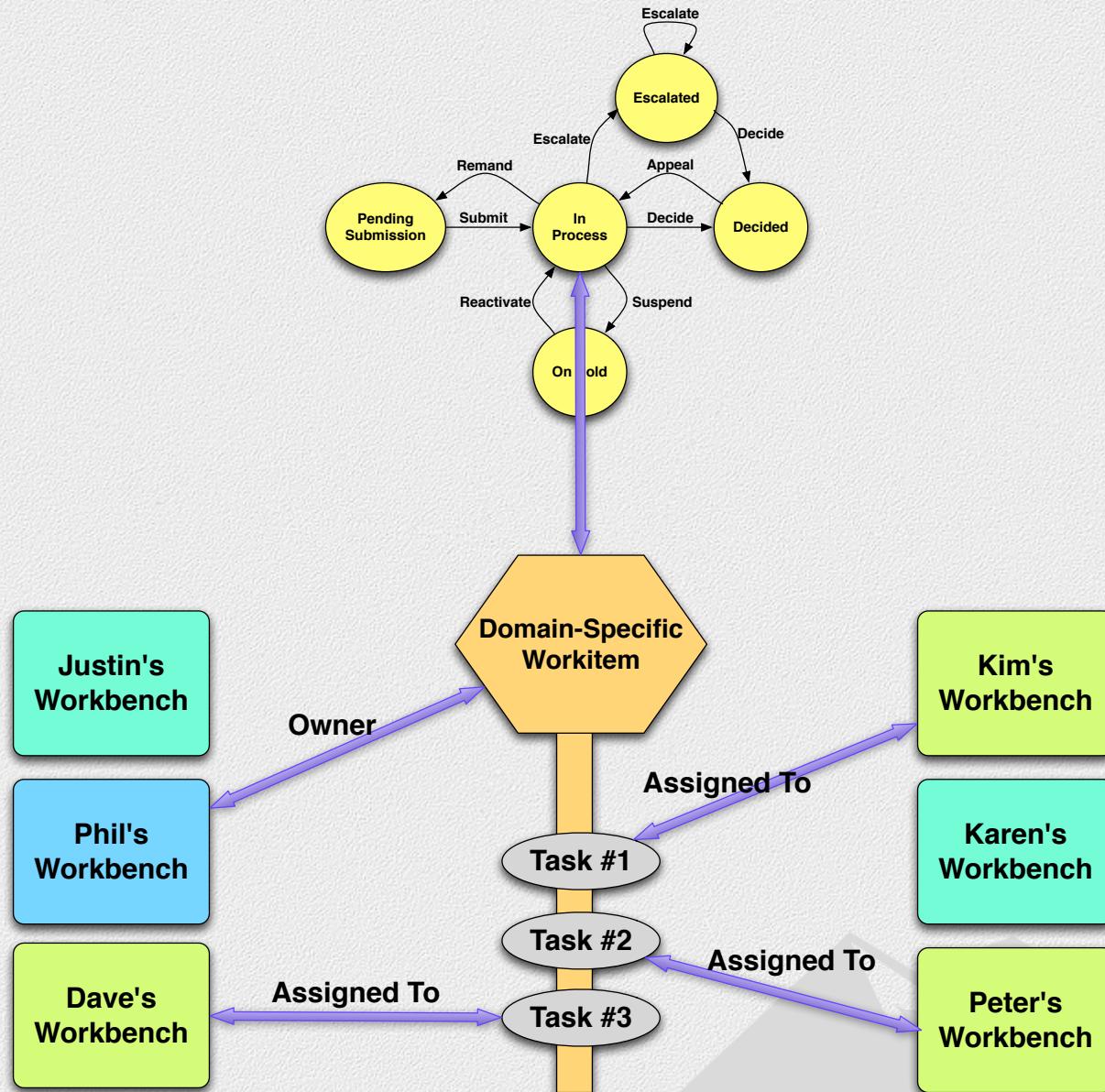




State-Based Workflow

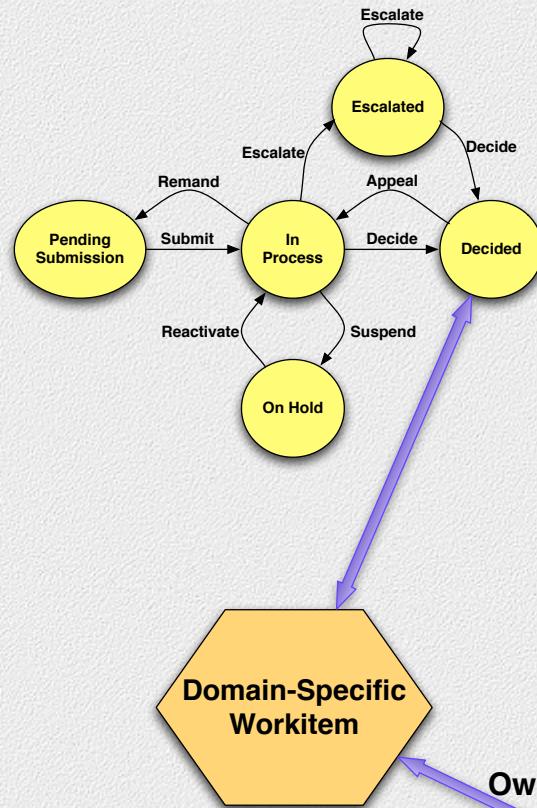


State-Based Workflow





State-Based Workflow



Domain-Specific
Workitem

Justin's
Workbench

Phil's
Workbench

Dave's
Workbench

Kim's
Workbench

Karen's
Workbench

Peter's
Workbench

Owner



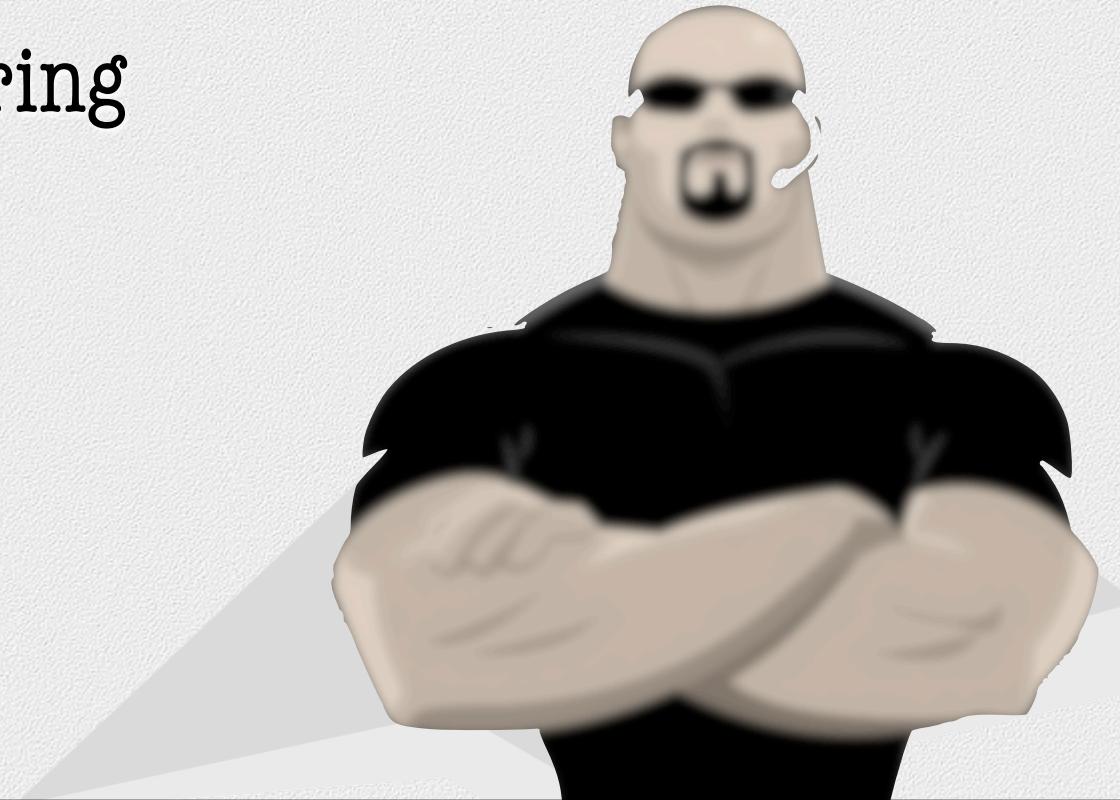
State-Based Workflow





State-Based Workflow

- Events and “Guards”
 - Can ‘hook into’:
 - State Entry and Exit
 - Transition Occurring
 - Can Block
 - Can Notify





State-Based Workflow





State-Based Workflow

| | | |
|------------------|-----------|-------------|
| Transition | | Owner |
| State | On Entry | |
| Sequence | | Concurrency |
| WorkBench | Task | |
| | WorkGraph | Assignment |
| Event | | Assignee |
| Transition Guard | Workflow | |
| | | Exit Guard |
| Permissions | | |
| Visibility | On Exit | |

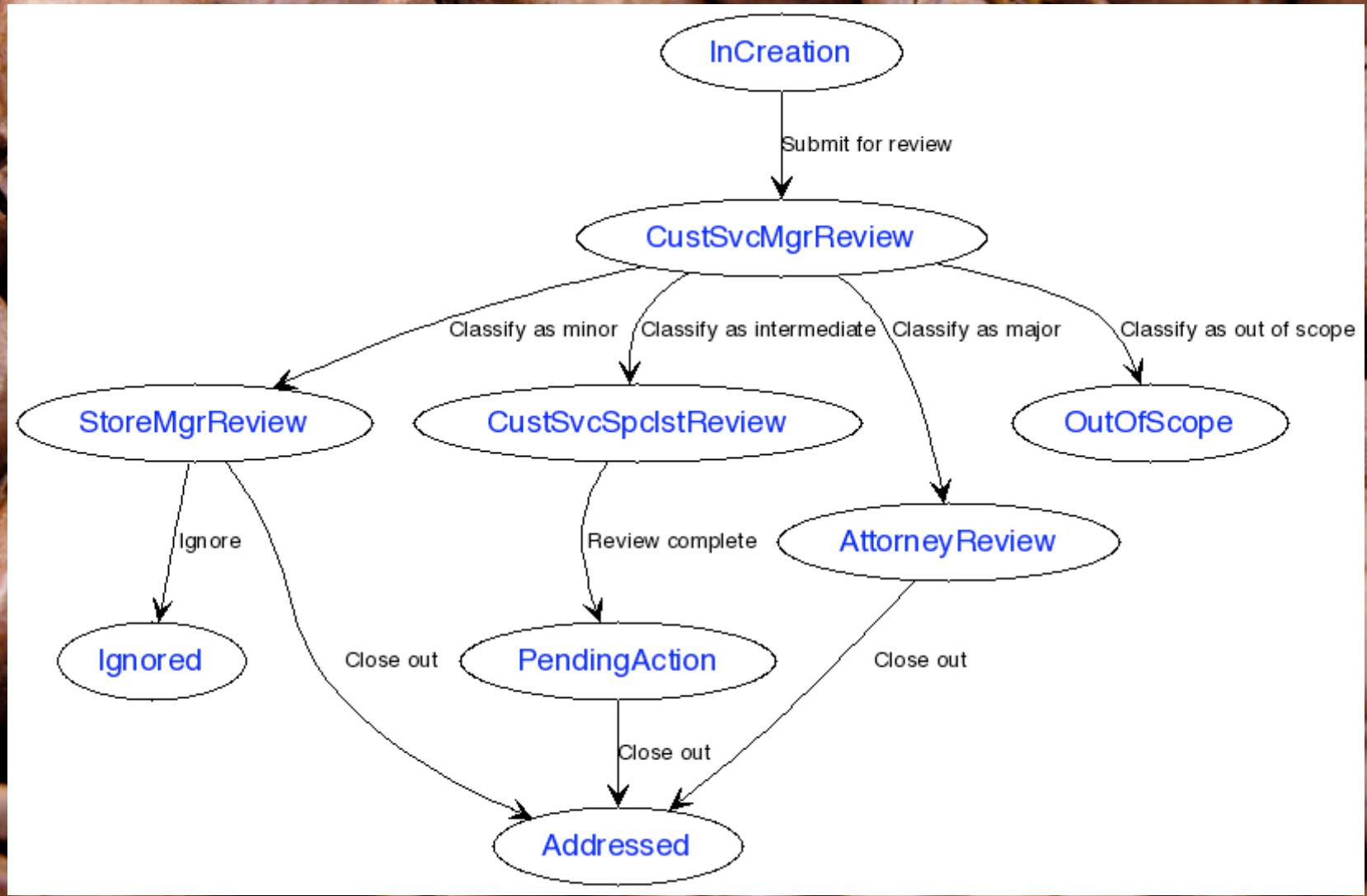




State-Based Workflow



North Harbor Coffee Company



Show me the code!





What About:

Visibility?

Permissions?

Access Control?

Grants?





- Further Discussion:
 - Tasks as Nested, RESTful Resources
 - Events as Nested, RESTful Resources
 - Events nested under both Workitems and Tasks
 - When do I model something as a State vs. a Task?
 - How is Ownership different than Task assignment?



Stonepath: an Introduction

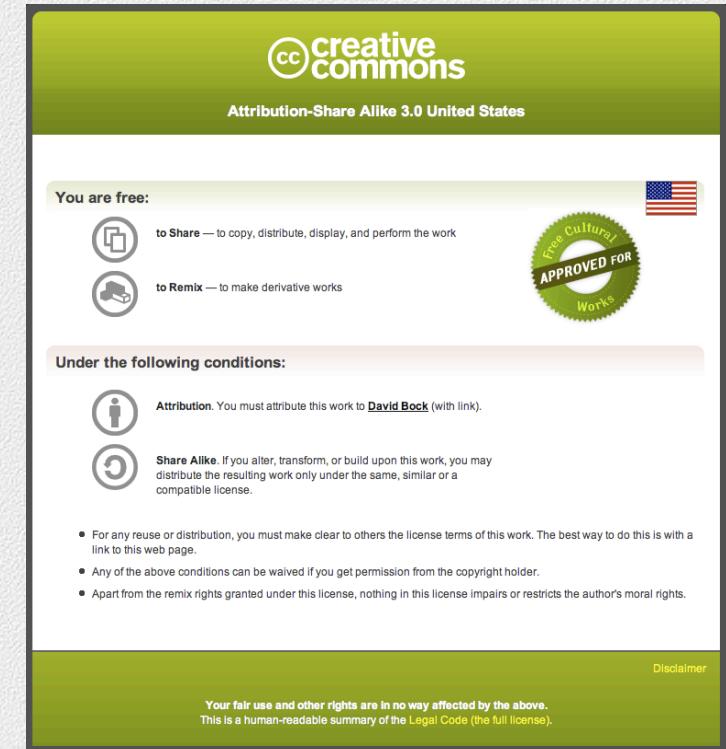
State/Task Workflow for Rails

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