



Apache Isis



Apache Isis Lightning Talk

LJC Open Conference
Nov 2010



Ubiquitous Language



With a conscious effort by the team, the domain model can provide the backbone for that common language

*Eric Evans,
Domain Driven Design*



What is Naked Objects ?

- A Principle
 - all business functionality is encapsulated on the core business objects
 - “problem solver, not process follower”
- An Architectural Pattern
 - reflects the domain model back as an OOUI
 - like Hibernate does, but forwards, not backwards
 - customize OOUI once domain model stabilizes
- A natural bed-fellow for Domain-Driven Design





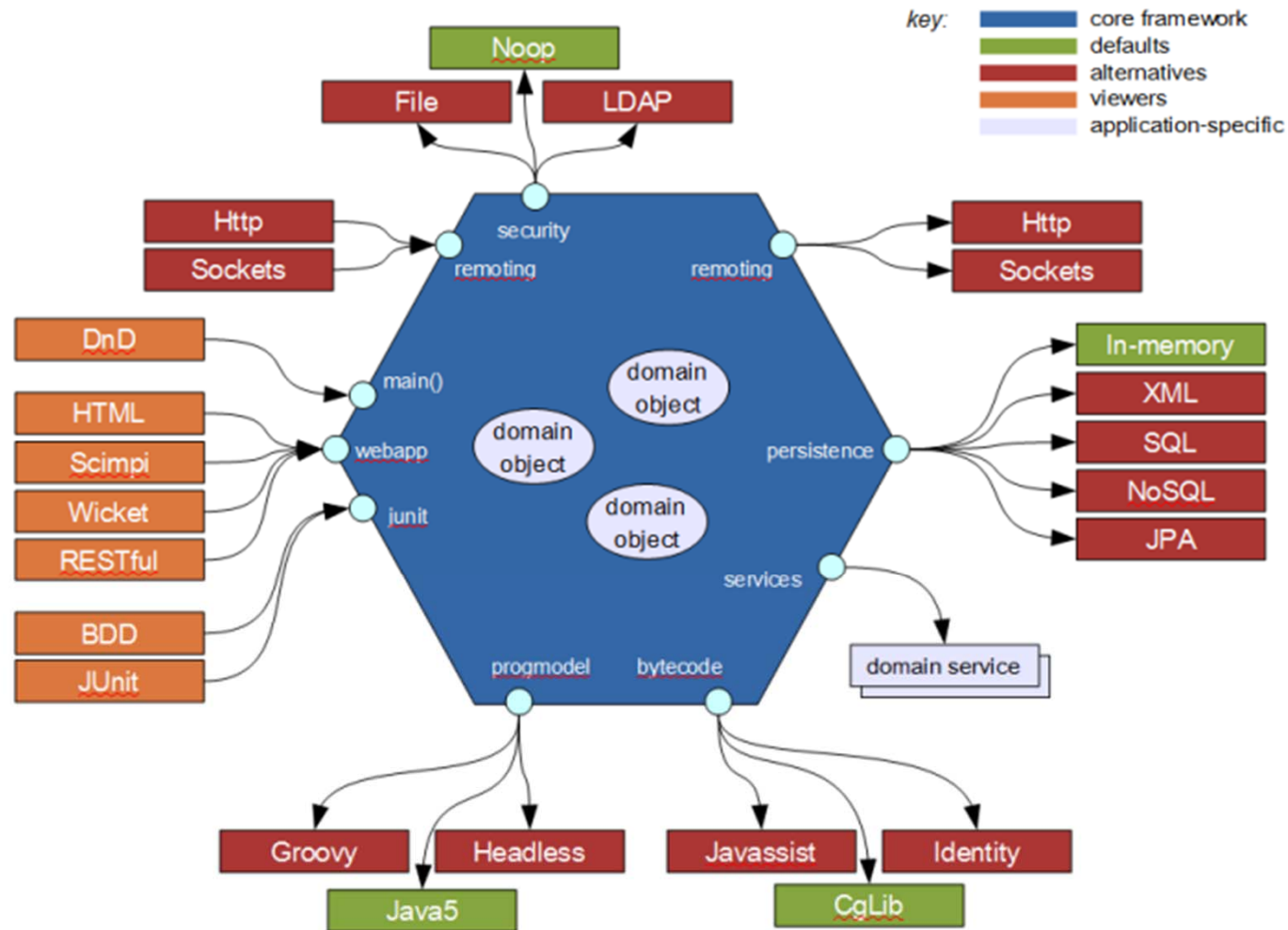
Following the DRY Principle

- The UI representations correspond directly with the underlying domain object model
- So, for instance:
 - objects instances exposed as icons
 - object properties / collections exposed in forms
 - remaining public methods exposed as menu items
 - eg `Claim#submit(Approver)`
 - repositories/domain services exposed as desktop icons
 - eg `ClaimRepository, EmployeeRepository`





What is Apache Isis?



- Isis combines the naked objects pattern with the hexagonal architecture
 - donation of the original Naked Objects Framework + sister projects



Isis apps are just pojos

```
Claim.java x
package org.nakedobjects.examples.claims.dom.claim;

import java.util.ArrayList;

public class Claim extends AbstractDomainObject {

    // {{ Description
    private String description;
    @MemberOrder(sequence = "1")
    public String getDescription() {
        return description;
    }
    public void setDescription(String description) {
        this.description = description;
    }
    // }}

    // {{ Date
    private Date date;
    @MemberOrder(sequence = "2")
    public Date getDate() {
        return date;
    }
    public void setDate(Date date) {
        this.date = date;
    }
    // }}

    // {{ Items
    private List<ClaimItem> items = new ArrayList<ClaimItem>();
    @MemberOrder(sequence = "6")
    public List<ClaimItem> getItems() {
        return items;
    }
    public void addToItems(ClaimItem item) {
        items.add(item);
    }
    // }}

    // {{ action: Submit
    public void submit(Approver approver) {
        setStatus("Submitted");
        setApprover(approver);
    }
    public String disableSubmit() {
        return getStatus().equals("New") ? null : "Claim has already been submitted";
    }
    public Object[] defaultSubmit() {
        return new Object[] { getClaimant().getApprover() };
    }
    // }}
}
```

Repository

↓ *

Claim



If we have time...

- ... let's take a quick look





The Wicket viewer

The screenshot displays the Wicket Objects application interface. The main page shows a list of employees with columns for Title, Limit, Name, and Some Hi. A modal dialog is open, showing a detailed view of Tom Brown, including a profile picture, name, and various form fields for editing.

Wicket Objects

Employees ▾ Claims ▾

All Employees
Find Employees...
New Employee

Apac dome you c simpl

Wicket Objects

localhost:8080/?wicket:bookmarkable

Wicket Objects

Employees ▾ Claims ▾

combined ▾

Tom Brown

Actions ▾

Limit : 0

Name : Tom Brown

Some Property With Default : Foo

Approver : Fred Smith show find using... ▾

OK Cancel

WICKET ATAX DEBUG

localhost:8080/?wicket:interface=:5:entity:entity:entityPropertiesAndCollections:entityPropertiesAndOrCollections:propertiesAndOrCollections:4:propertyOrCollections:scalarIf...

Title	Limit	Name	Some Hi
Tom Brown	0	Tom Brown	
Sam Jones	0	Sam Jones	
Fred Smith	0	Fred Smith	



The Restful viewer

Services - Mozilla Firefox

Services

Logged in as

- [exploration](#)

Resources

- [Services](#)
- [Specifications \(MetaModel\)](#)
- [User \(Security\)](#)

Services

- [Employees](#)
- [Claims](#)

Employees - Mozilla Firefox

Employees

Logged in as

- [exploration](#)

Resources

- [Services](#)
- [Specifications \(MetaModel\)](#)
- [User \(Security\)](#)

Object title Employees

OID [OID:1](#)

Specification [org.apache.isis.support.prototype.objsto](#)

Properties

Name	Type	Hidden	Access	Disabled
id	java.lang.String	N	claimants	Y

Collections

Name	Type	Hidden	Disabled	Access	AddTo	Re
All Employees	USER				java.util.List	

Actions

Name	Type	Type
All Employees	USER	java.util.List

Employees.allEmployees() - Mozilla Firefox

Employees.allEmployees()

Logged in as

- [exploration](#)

Object title Employees

OID [OID:1](#)

Specification [org.apache.isis.support.prototype.objstore.dflt.emp](#)

allEmployees()

Action Results

- [Tom Brown](#)
- [Sam Jones](#)
- [Fred Smith](#)

Tom Brown - Mozilla Firefox

Tom Brown

Logged in as

- [exploration](#)

Resources

- [Services](#)
- [Specifications \(MetaModel\)](#)
- [User \(Security\)](#)

Object title Tom Brown

OID [OID:4](#)

Specification [org.apache.isis.support.prototype.dom.employee.Employee](#)

Properties

Name	Type	Hidden	Access	Disabled	Disabled Reason	Parseable	Modify	Clear
Limit	int	N	0	N		N	<input type="text" value="Set"/>	<input type="button" value="Clear"/>
Name	java.lang.String	N	Tom Brown	N		N	<input type="text" value="Set"/>	<input type="button" value="Clear"/>
Some Hidden Property	java.lang.String	Y		N		N		
Some Property With	java.lang.String	N	Foo	N		N	<input type="text" value="Set"/>	<input type="button" value="Clear"/>



What Next?

- We're looking for users!
 - try it out for prototyping
 - try it out for a small system
- We're looking for contributors!
 - help us take Isis through the Apache incubator
- Resources
 - Web: <http://incubator.apache.org/isis>
 - ML: <mailto:isis-dev@incubator.apache.org>
 - IRC: <irc://freenode.net>
/join #apache-isis
 - Book: <http://www.pragprog.com/titles/dhnako>

The Pragmatic Programmers

Domain-Driven Design
Using Naked Objects



Dan Haywood
Edited by Suzanne's Daughter Editor