

Object thinking

the lost art

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(cc by-sa) 2012 Matteo Vaccari



Agenda

- 15' Explanation
- 25' First CRC session
- 10' Discussion
- 25' Second CRC session
- 15' Conclusion

OCP, DIP, SRP, LSP,...

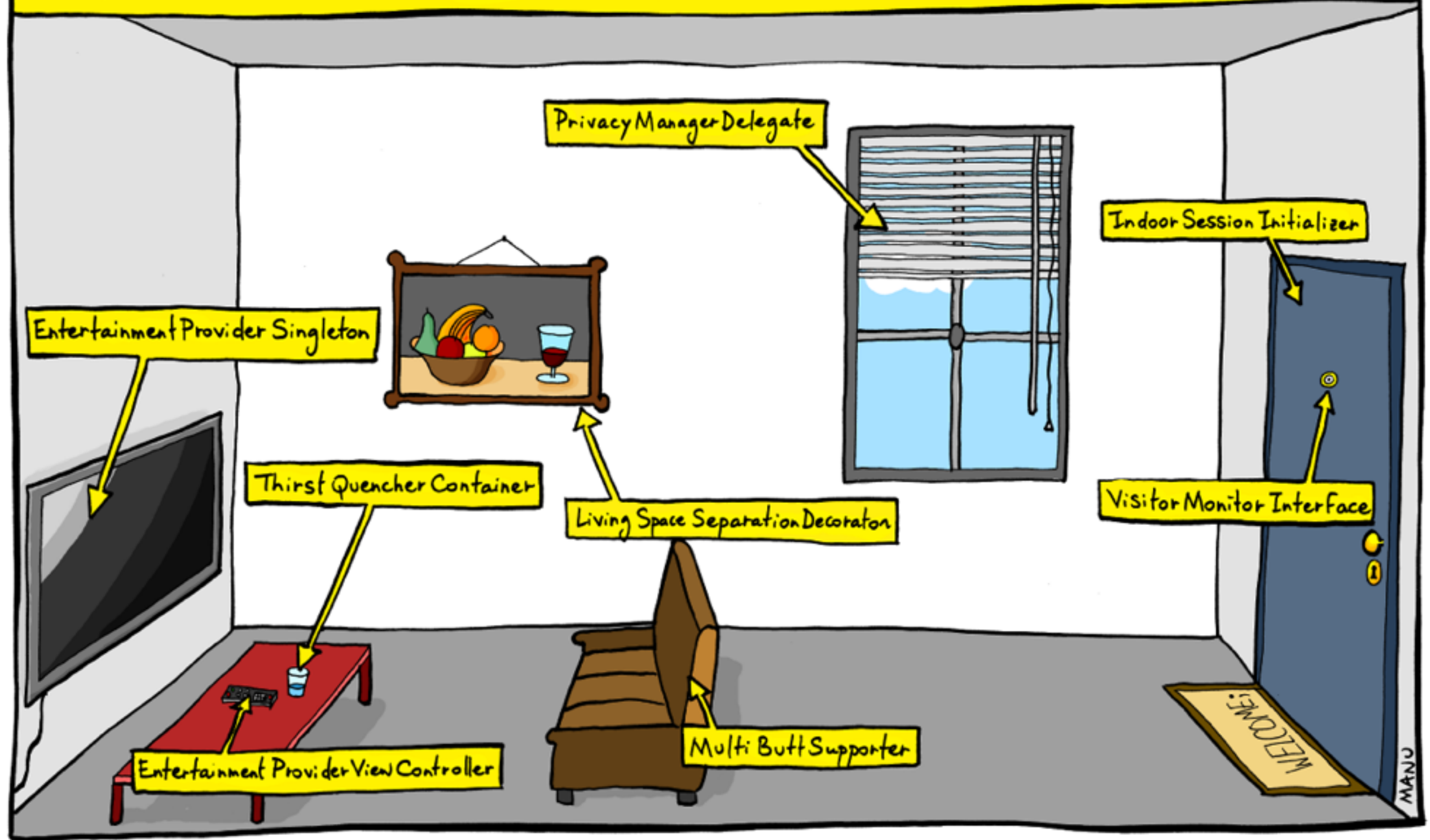
Decorator, Mediator,
Bridge, Adapter, Composite,
Visitor, Flyweight...

Minimal yet *flexible*

Dafydd Rees

Class Names

THE WORLD SEEN BY AN "OBJECT-ORIENTED" PROGRAMMER.



<http://www.bonkersworld.net/object-world/>

ParameterObjectCreatorContentProvider

IDataGridColumnStyleEditingNotificationService

AbstractInterruptibleBatchPreparedStatementSetter

OTA_AirAvailRSOriginDestinationOptionFlightSegmentTPA_ExtensionsDaysOfOperationOperationScheduleOperationTimesOperationTime

The name of a class:

1. Should not end in -er
2. Should be the name of a *thing*, not an action
3. Should correspond to a *domain concept*

Example: a web app to convert inches to meters

- UnitController^{er} ?
- UnitConverter^{er} ?

Responsibilities

- For **knowing**
- For **doing**
- For **deciding**

*I am a **Counter**.
I know my value.
I can increment myself.
I can decrement myself.*

*I am an **Invoice**.
I know my **LineItems**.
I compute my total.*

Collaborators

I am an Invoice.

I know my Lineltems.

I compute my total.

I am a Lineltem.

I know my Product and quantity.

I compute my own total.

I am a SpecialOffer.

I compute a discount.

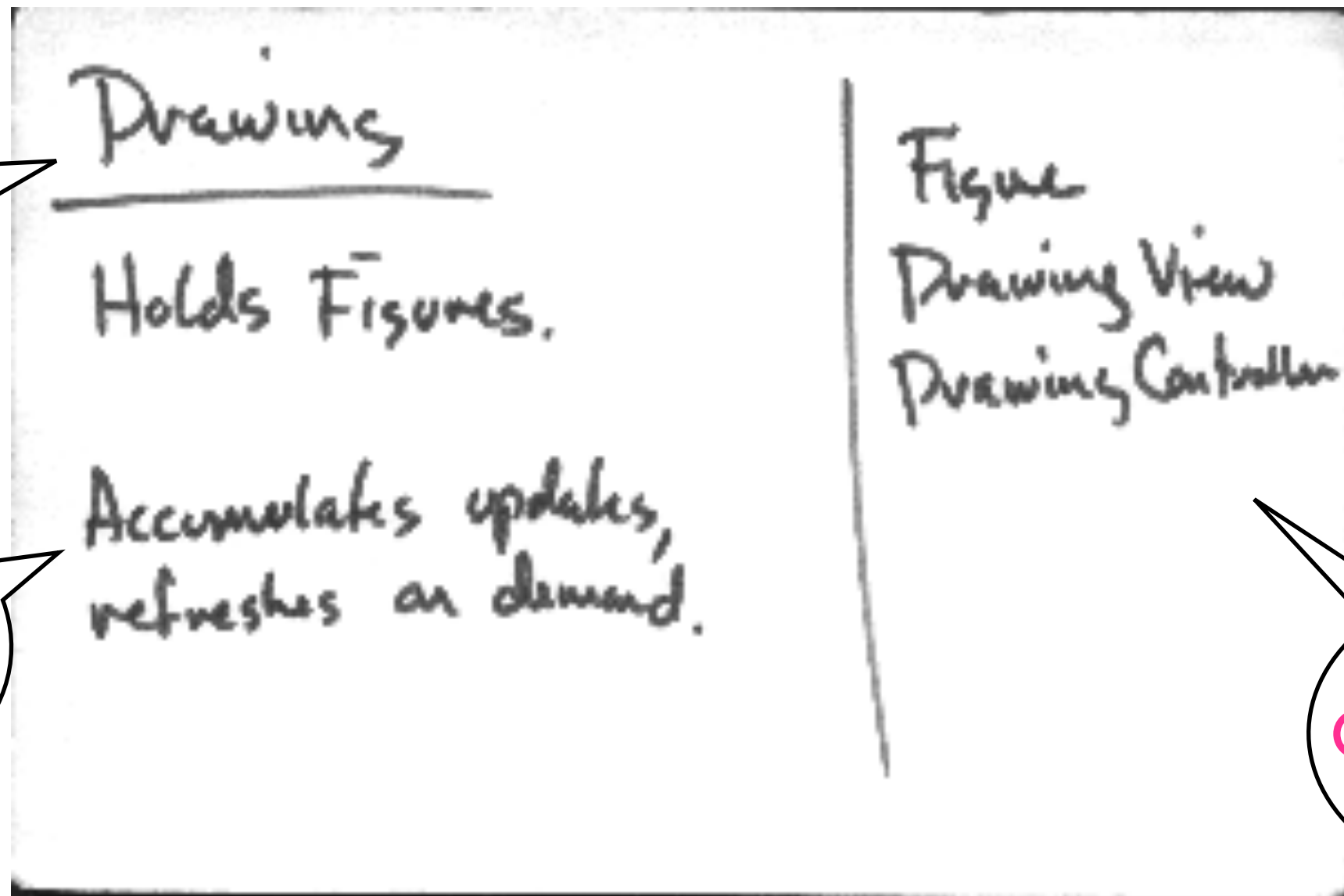
I know if I'm valid today.

I am a Product.

I know my unit price.

I may have a SpecialOffer

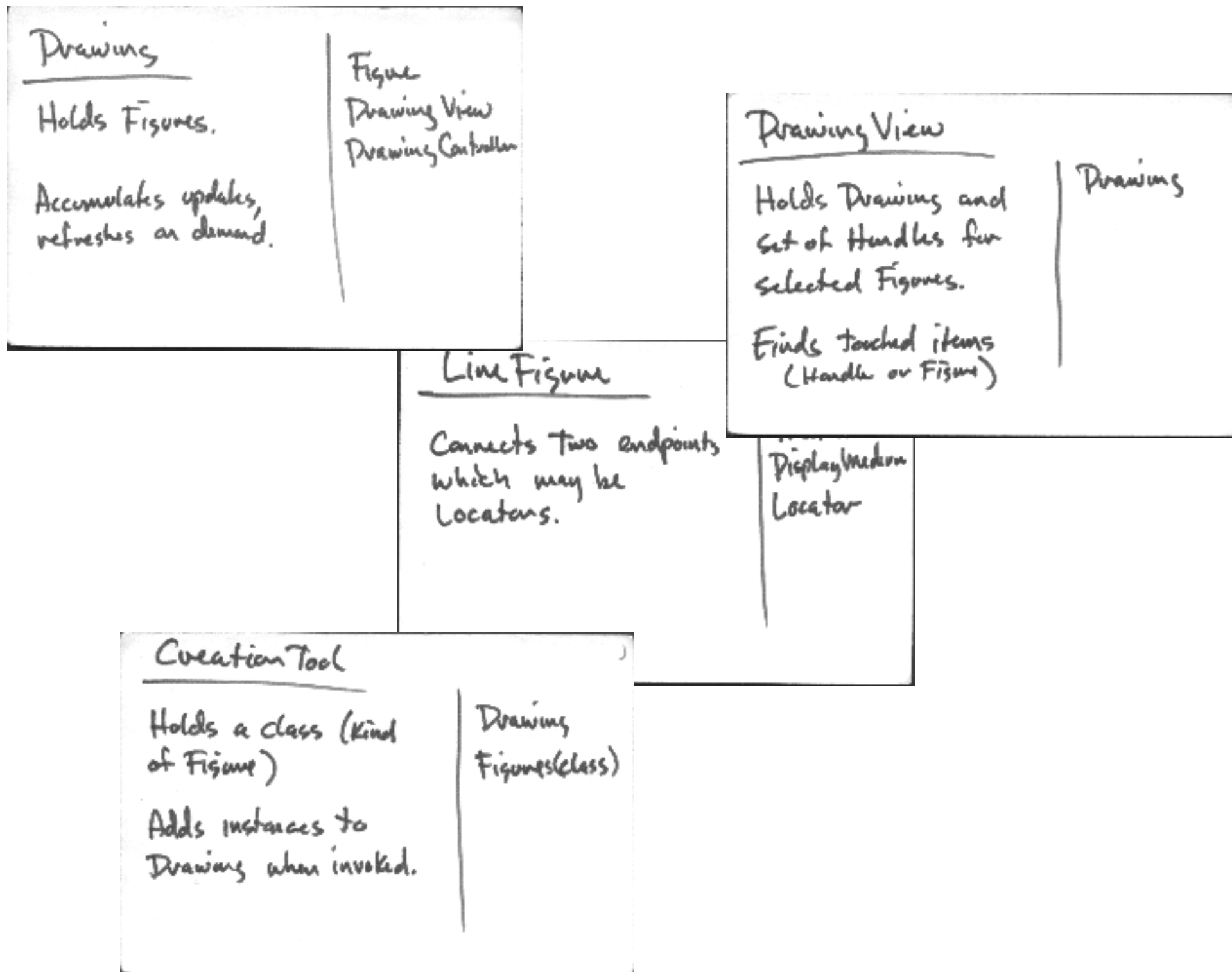
A Class, Responsibility, Collaborators card



Name

Responsi-
bilities

Collaborators



<http://c2.com/doc/crc/draw.html>

A CRC Session

- Problem presentation
- Brainstorm for classes
- Filter classes (agree on meaning)
- Assign classes (write cards)
- Roleplay scenarios

How to roleplay

- Choose a scenario
- Choose which class receives the first message
- **Pick up the card** and become the object!
- If you can do it, then do it
- Otherwise, ask a collaborator

A Laboratory For Teaching Object-Oriented Thinking

Kent Beck, Ward Cunningham

<http://c2.com/doc/oopsla89/paper.html>