



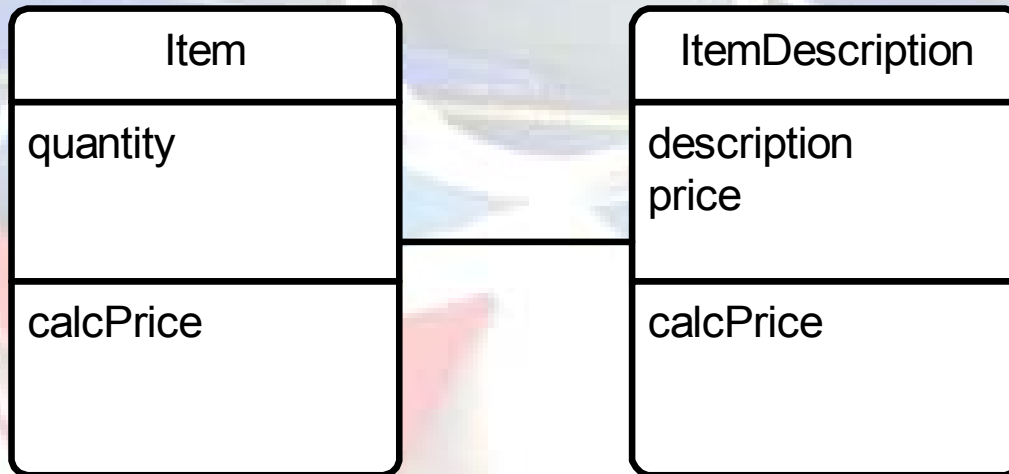
The Coad Method's Contribution to Agile

FDD, Communication,
Agile QA & Lean Development

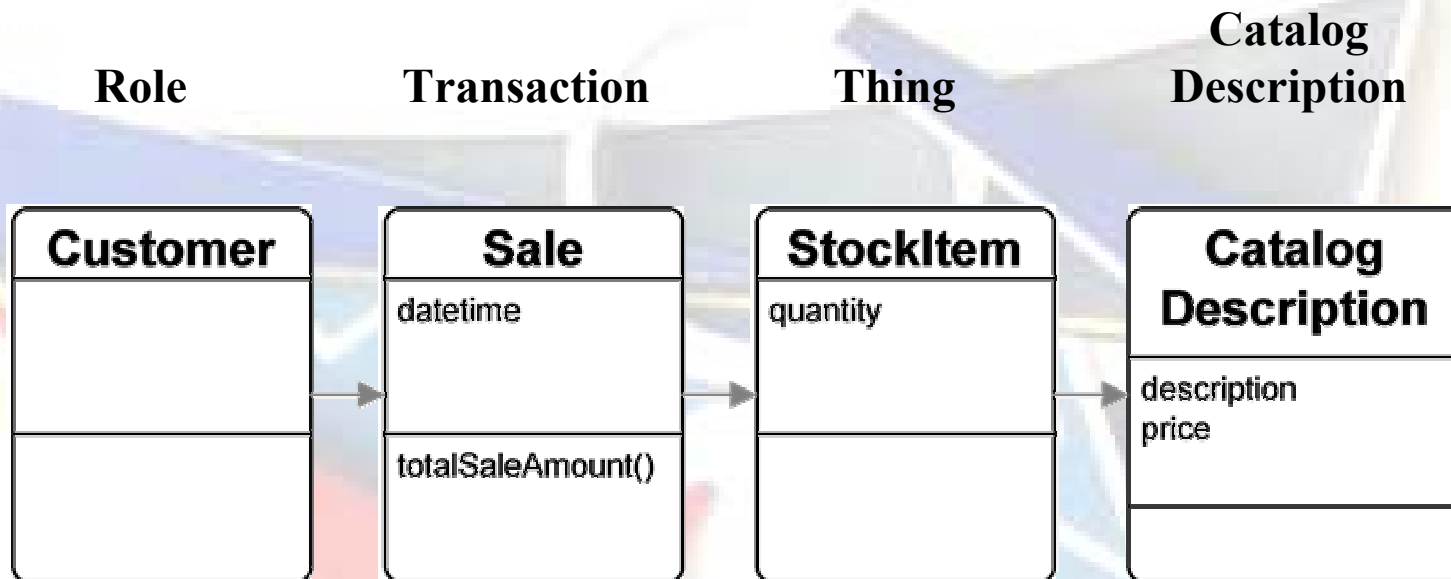
David J. Anderson

Based on the work of Peter Coad, Stephen R. Palmer and others

History - 1992



History - 1995



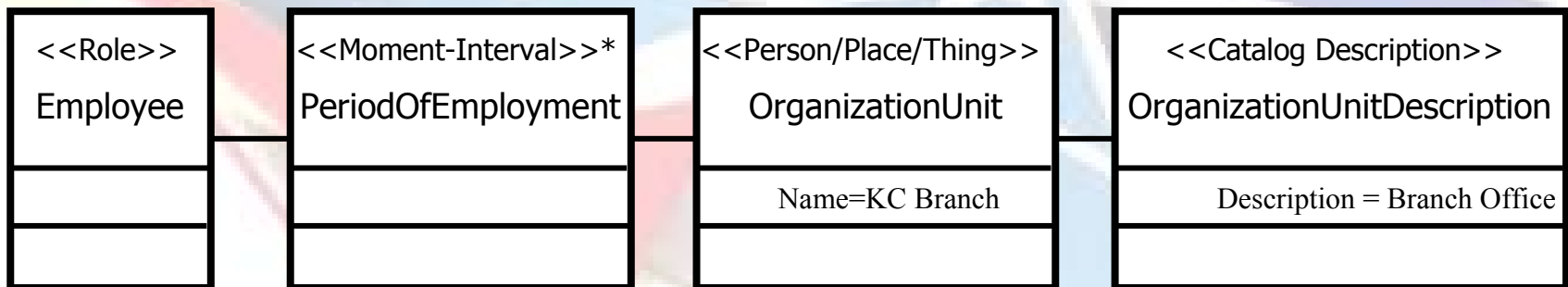
Object Models: Strategies, Patterns & Applications, 1st ed., Coad, Mayfield & North, Yourdon Press, Prentice Hall, 1995

History – Spring 1997



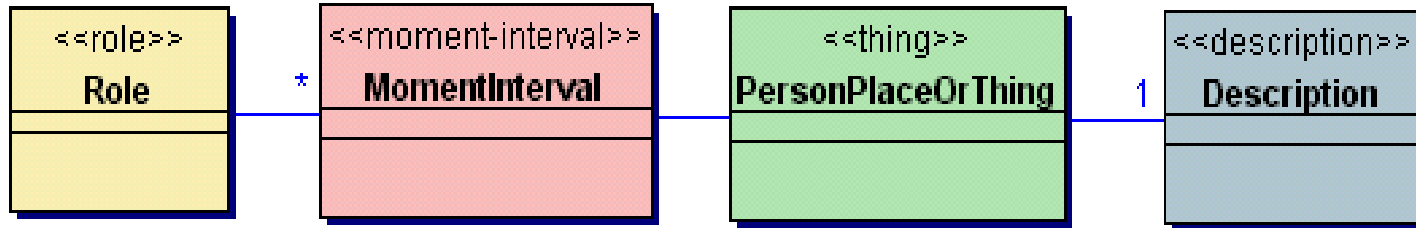
Moment or Interval – a generalization of the idea of a transaction e.g.

- Warranty Period
- Period of Employment
- Loan Approval Request
- Funds Disbursement



[*still referred to as “Transaction” in], Object Models: Strategies, Patterns & Applications, 2nd ed., Coad, Mayfield & North, Yourdon Press, Prentice Hall, 1997

History – September 1997



Color instantly communicates the pattern of class relationships to the viewer

If the colors are not configured in the correct pattern then there are strong clues that the model could be improved!

Agile Link to Coad and FDD



- Agile Manifesto Signatory Jon Kern
- Jon was co-author of 2nd edition of Java Design and worked for Togethersoft
- Peter Coad delegated attendance at Snowbird in 2001 to Jon
- Jon was Stephen Palmer's boss

Practices in FDD



- Frequent, Tangible, Working Results
- A context for best practices
 - Domain object modeling
 - Developing by feature
 - Class (code) ownership
 - Feature teams
 - Inspections
 - Regular builds
 - Configuration management
 - Visibility of results

Dec 1998 – Archetypes



Philip Bradley argues for Archetypes not stereotypes.

“ a model from which all things of the same kind more or less follow”

rather than

“ a conventional, formulaic, over-simplified conception, opinion or image”

And that, all business flows should or ought to be basically the same.

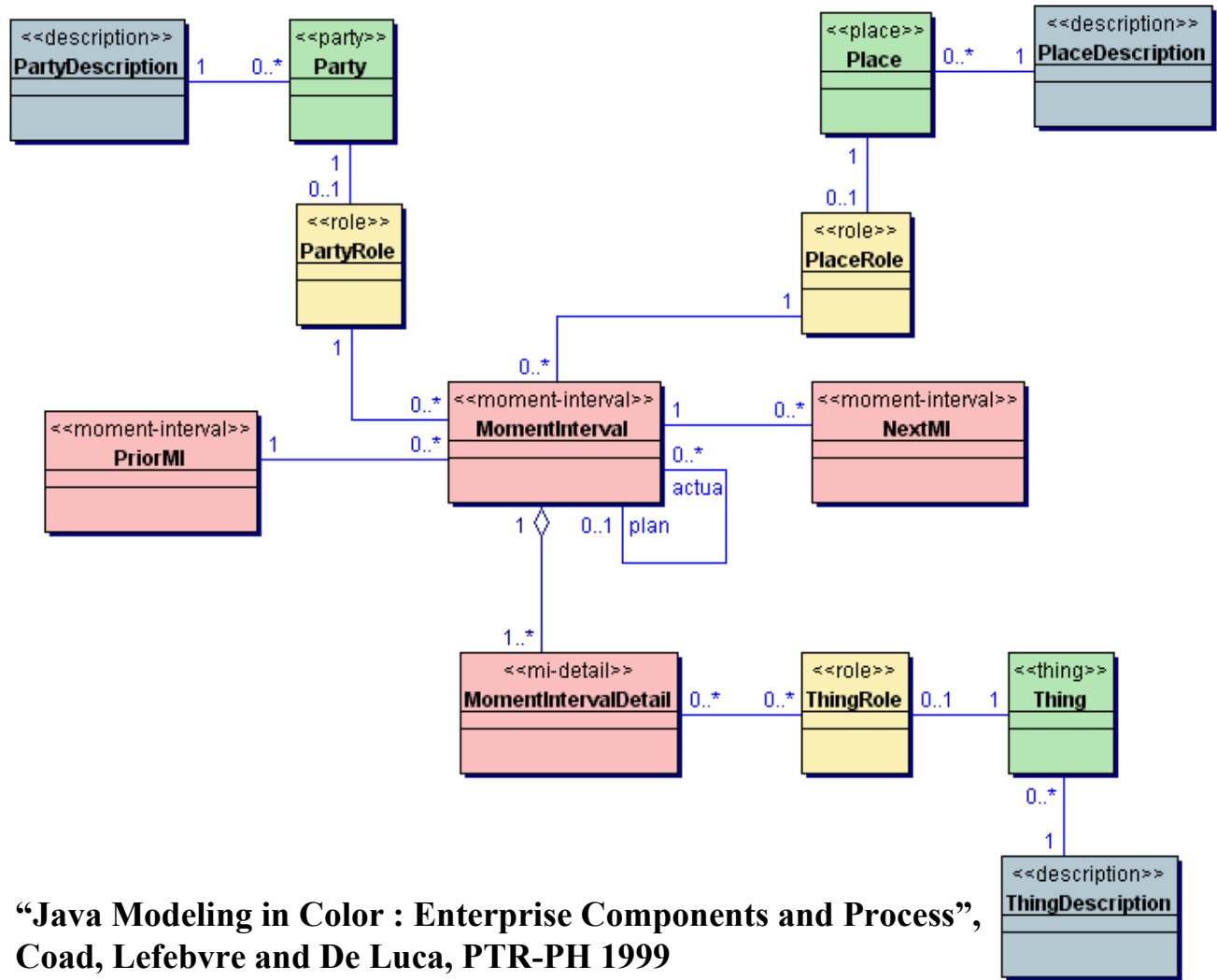
“Data Model Patterns - Conventions of Thought”,

David Hay, Dorset House, 1996

[The Universal Data Model]

Phil Bradley was Development Manager Persistence Layer, PowerLender Project, United Overseas Bank, Singapore 1997 - 1999

History – January 1999



“Java Modeling in Color : Enterprise Components and Process”,
Coad, Lefebvre and De Luca, PTR-PH 1999

Behavior of Colors



Courtesy Stephen R. Palmer

<<moment-interval>> Class1
referenceNumber dateOrDateTimeOrInterval priority total status

**totalValue()
isComplete()
isUrgent()**

<<role>> Class2
assignedNumber status

**assessPerformance()
salesMadeInPeriod()
averageSalesOverPeriod()
assessAccuracy()
assessSpeed()
isActive()
isSuspended()**

<<party-place-thing>> Class3
identityNumber name address customValue

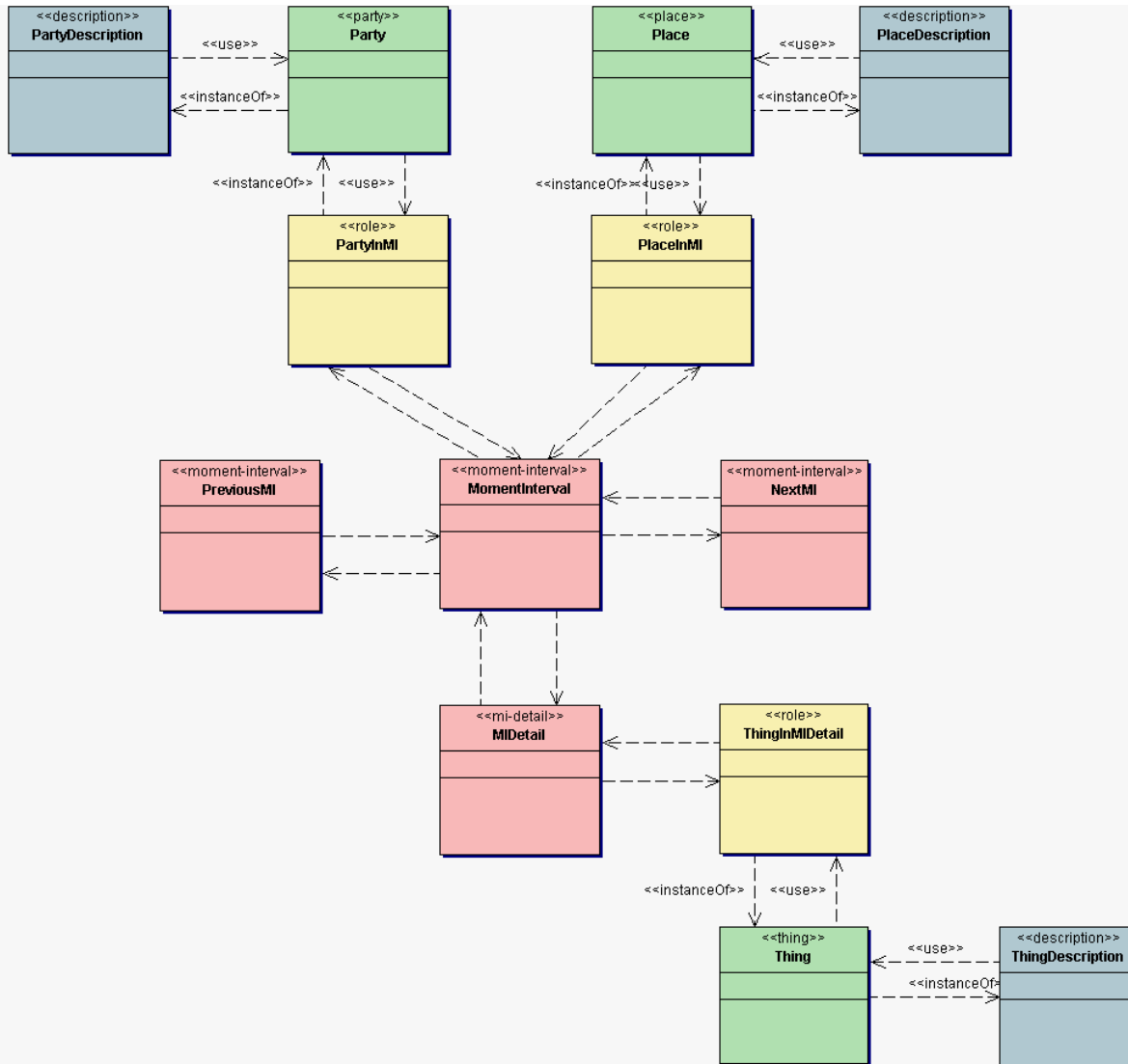
**_findByIdNumber()
_findByName()
isOfType()
getValue()
assessAcrossRoles()
listRolesPlayedBy()**

<<description>> Class4
type itemNumber Description defaultValue

**totalUnitsAvailable()
totalUnitsManufactured()
assessRoleAllowed()**

- Instances of Archetypes share similar attributes
- Instances of Archetypes share similar methods

Law of Demeter

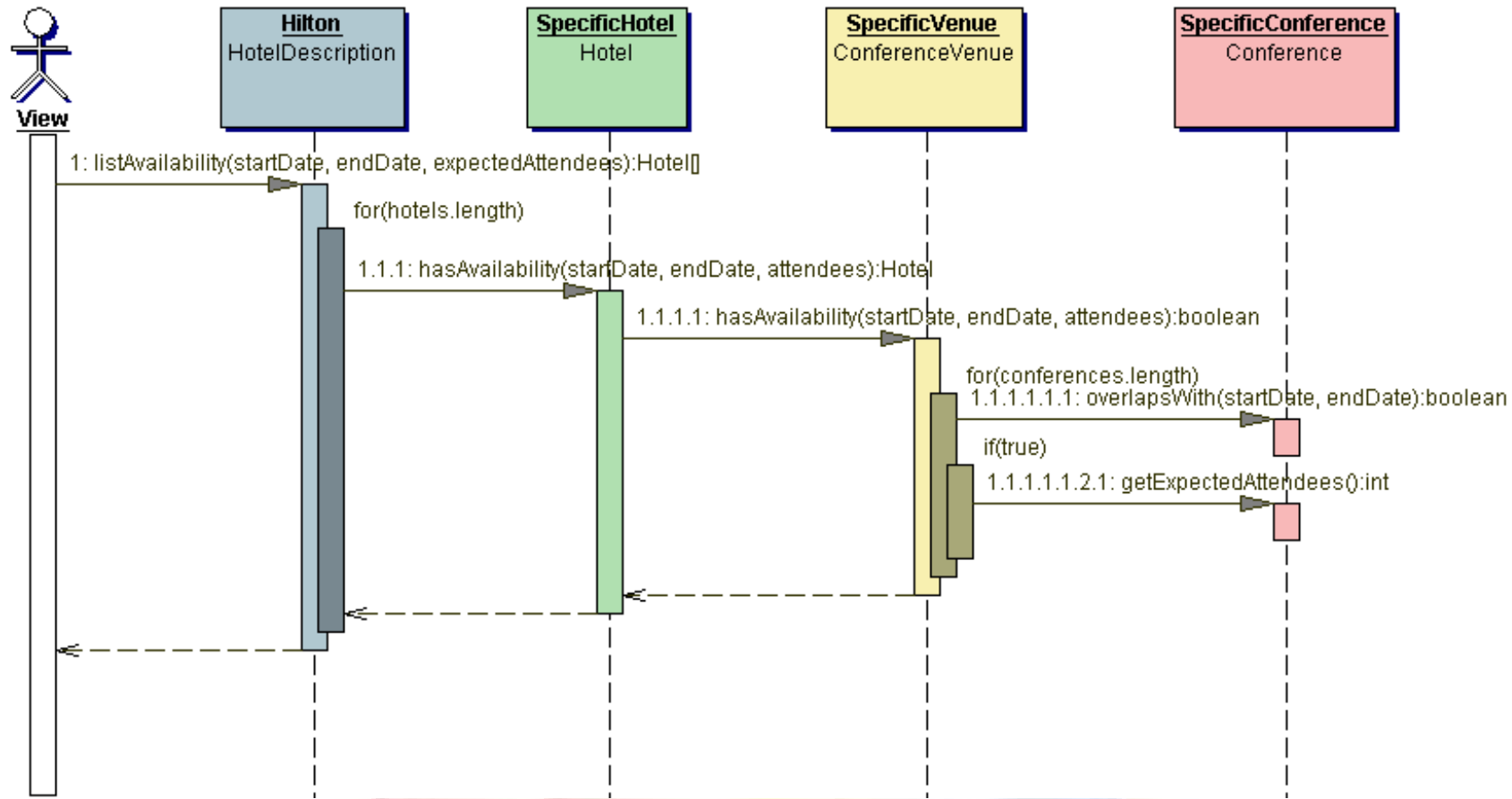


A different view of the DNC showing the dynamic dependencies between classes.

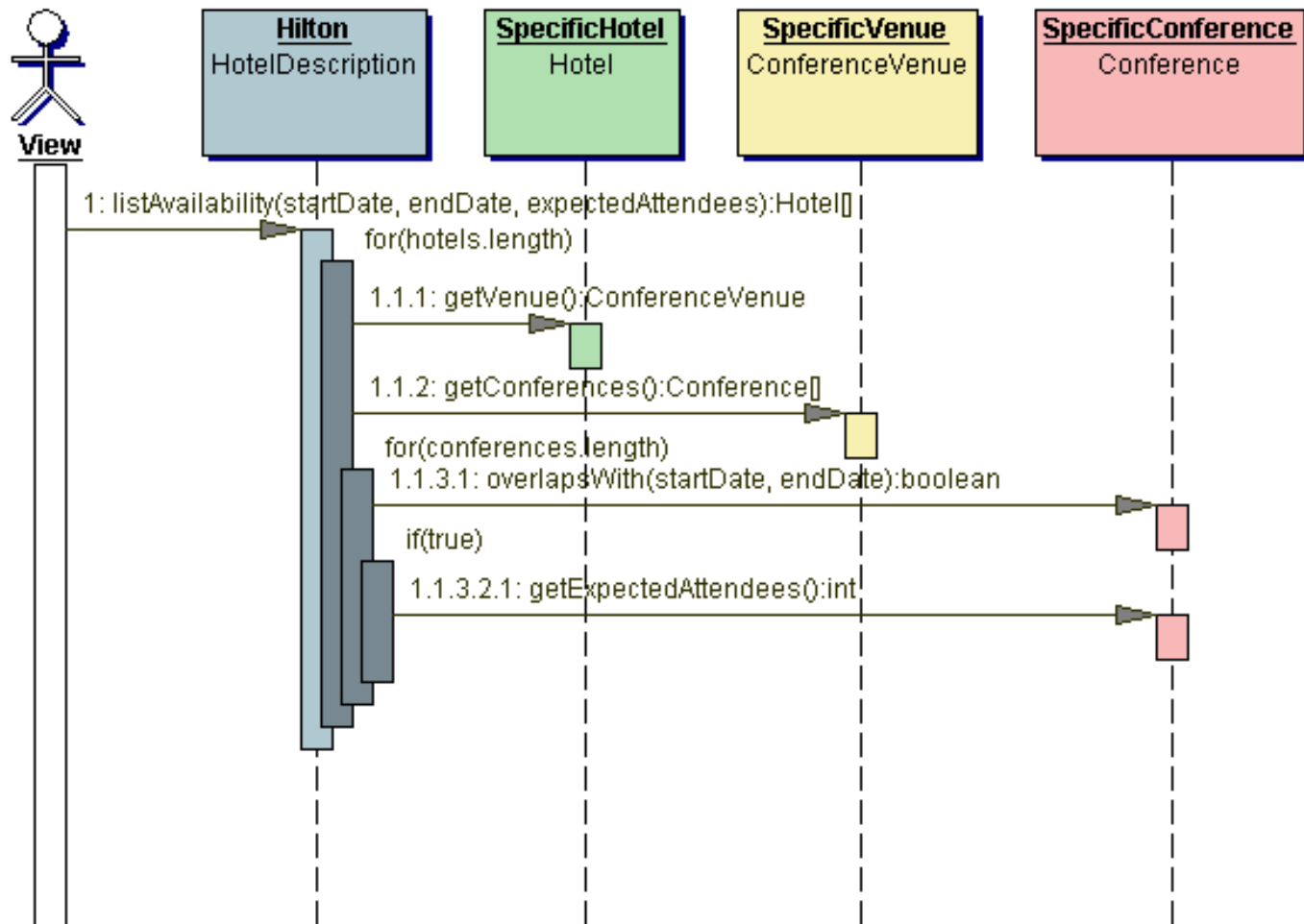
Classes only hold dependencies to their immediate neighbors

The DNC is very loosely coupled

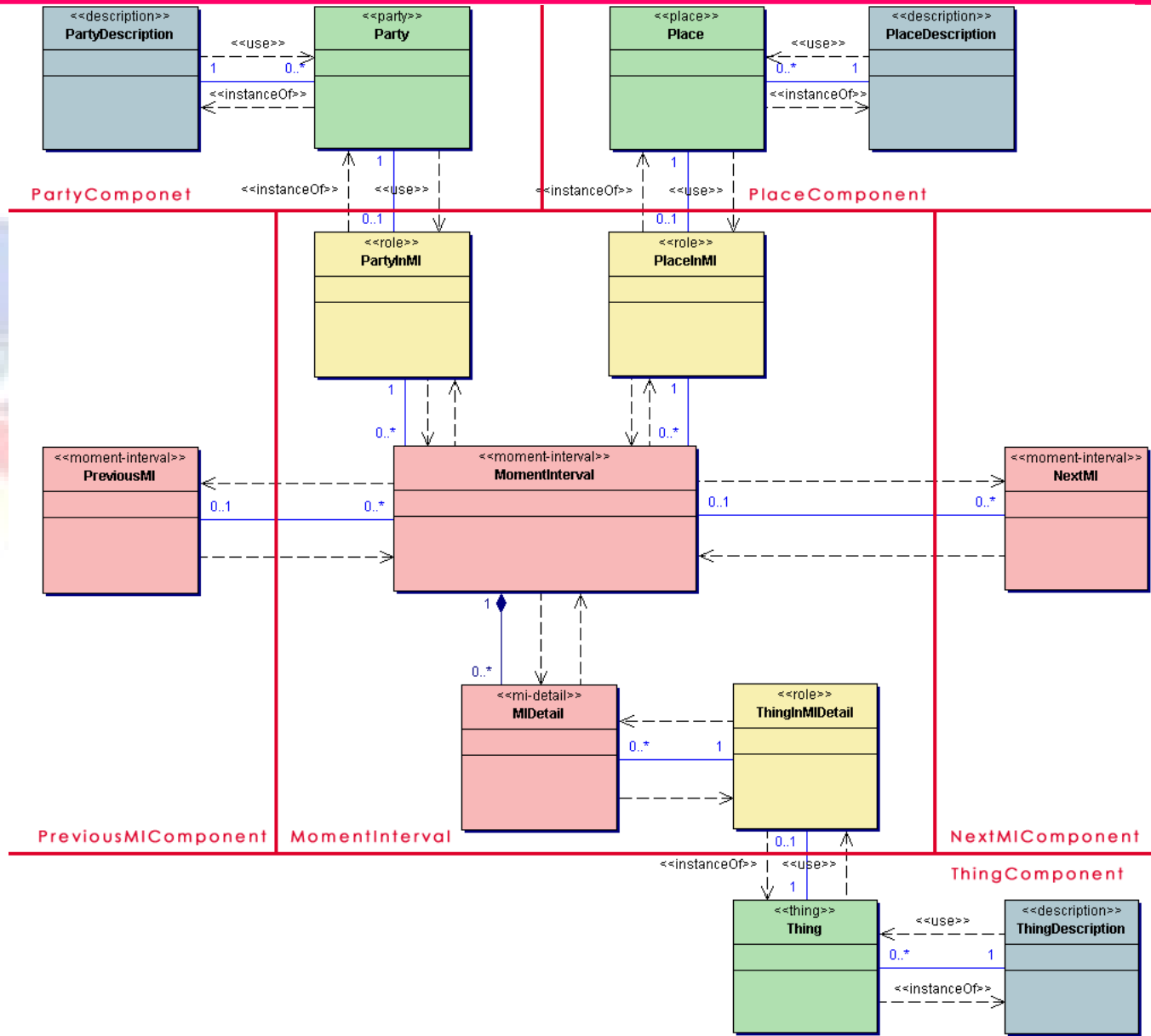
LoD Compliant Sequence Diagram



Wrong – not LoD Compliant



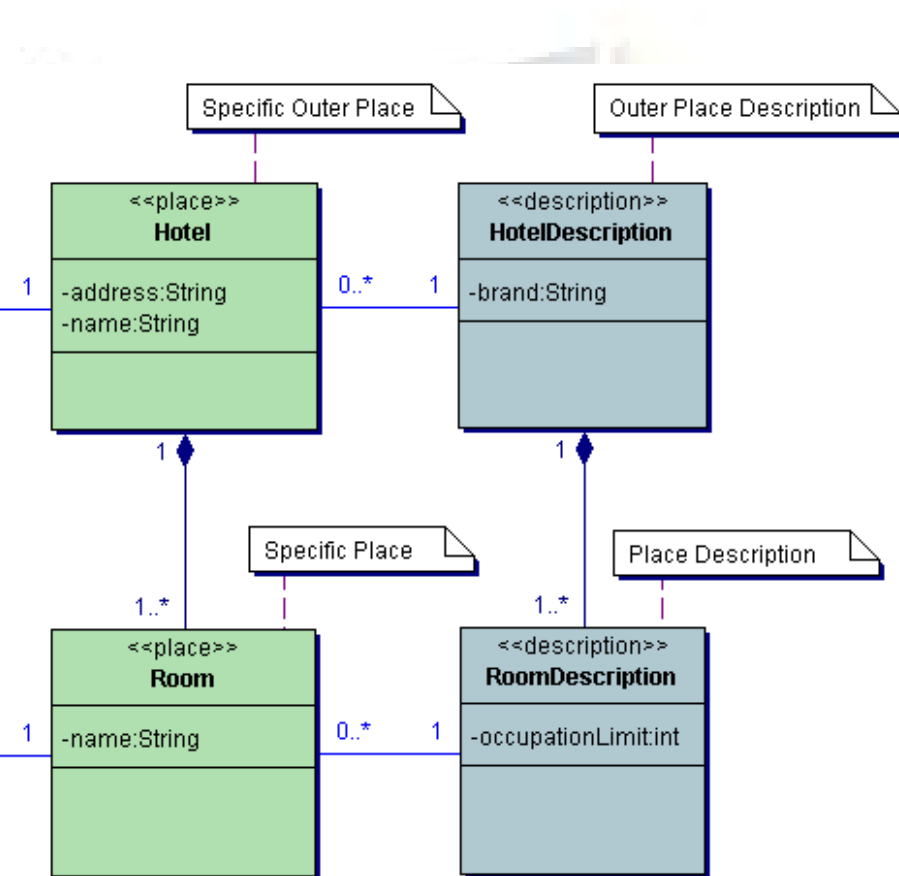
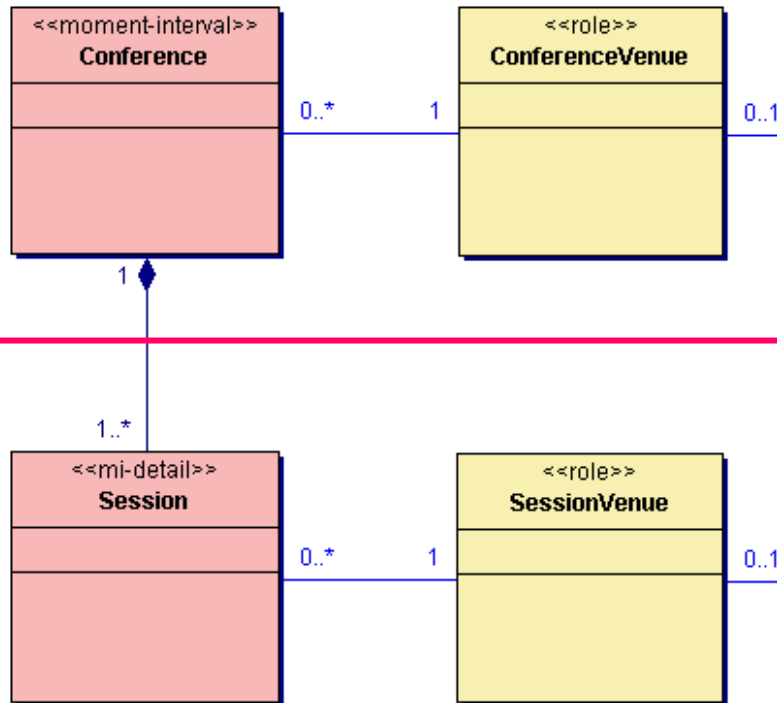
Possible Component Boundaries



Re-usable Enterprise Components



Pinks and yellows are re-usable across multiple greens – the core Enterprise Components



Greens and blues are re-usable across discrete Enterprise Applications modeled as sequences of pinks

Definition of an Agile Model



- Elegant
- Enough to get the job done and no more
- Extensible
- Loosely coupled
- Robust and resilient to change
- Communicates clearly

“ In anything at all, perfection is finally attained not when there is no longer anything to add, but when there is no longer anything to take away”

Antoine de Saint Exupery

Summary – Coad Method in Agile



- Domain Modeling is the basis of communication
- Coad's color modeling – powerful technique designed to facilitate agility
- DNC is reliable and repeatable
 - a basic pattern even novice modelers can follow
 - Reduces uncertainty and variability, makes estimating easier
- Small batch sizes – 2 weeks
- Small release sizes – 3 months
- Tracks value delivered not programmer tasks or effort
- Features focused on fine grained value
- **The Coad Method & FDD – the original Lean Development Method**

References



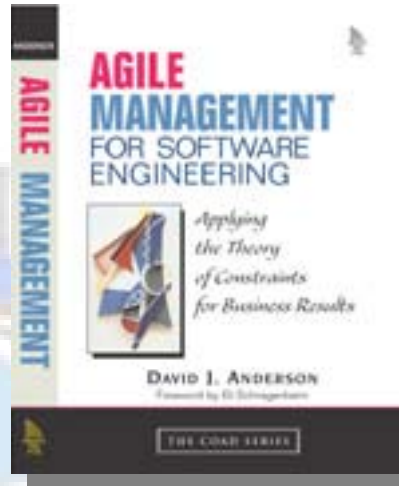
Object Models: Strategies, Patterns & Applications, 2nd ed., Coad, Mayfield & North, Yourdon Press, Prentice Hall, 1997

Java Modeling in Color with UML : Enterprise Components and Process, Coad, Lefebvre, De Luca, Prentice Hall, 1999

A Practical Guide to Feature Driven Development, Palmer, Stephen R., and John M. Felsing, Prentice Hall, 2001

Data Model Patterns : Conventions of Thought, David Hay, Dorset House, 1996

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