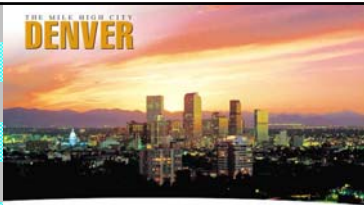


THE MILE HIGH CITY
DENVER



Integration for Implementation

and the "new" Zachman Framework

Stan Locke

Toronto, Canada

StanL@offline.com

www.ZachmanInternational.com



Integration is about assemblies

- Holistic nature of Business
- Integrating the answers
- Integrating component details
- Diagonal integration implications
- Making composites for practical use

Three kinds of Integration

ENTERPRISE ARCHITECTURE - A FRAMEWORK™

	DATA	What	FUNCTION	How	NETWORK	Where	PEOPLE	Who	TIME	When	MOTIVATION	Why	
SCOPE (CONTEXTUAL)	List of Things Important to the Business		List of Processes to be Performed		List of Locations in which the Business Operates		List of Organizations Important to the Business		List of Events/Cycles Significant to the Business		List of Business Goals/Strategies		SCOPE (CONTEXTUAL)
Planner	Entity = Class of Business Thing e.g. Semantic Model		Process = Class of Business Process e.g. Business Process Model		Node = Major Business Location e.g. Business Location System		People = Major Organization Unit e.g. Work-Force Model		Time = Major Business Event/Cycle e.g. Master Schedule		Ends/Means = Major Business Goal/Strategy e.g. Business Plan		Planner
BUSINESS MODEL (CONCEPTUAL)													BUSINESS MODEL (CONCEPTUAL)
Owner	Ent = Business Entity Rel = Business Relationship e.g. Logical Data Model		Proc = Business Process IO = Business Resources e.g. Application Architecture		Node = Business Location Link = Business Linkage e.g. Distributed System Architecture		Work = Work Product e.g. Human Interface Architecture		Time = Business Event Cycle = Business Cycle e.g. Processing Structure		End = Business Objective Means = Business Strategy e.g. Business Rule Model		Owner
SYSTEM MODEL (LOGICAL)													SYSTEM MODEL (LOGICAL)
Designer	Ent = Data Entity Rel = Data Relationship e.g. Physical Data Model		Proc = Application Function IO = User Views e.g. System Design		Node = I/O Function Processor, Storage, etc. Link = Line Characteristics e.g. Technology Architecture		People = Role Work = Deliverable e.g. Presentation Architecture		Time = System Event Cycle = Processing Cycle e.g. Control Structure		End = Structural Assertion Means = Action Assertion e.g. Rule Design		Designer
TECHNOLOGY MODEL (PHYSICAL)													TECHNOLOGY MODEL (PHYSICAL)
Builder	Ent = Segment/Tables/ Rel = Partition/Keys e.g. Data Definition		Proc = Computer Function IO = Data Element/Fields e.g. Program		Node = Hardware/Systems Software Link = Line Specifications e.g. Network Architecture		People = User Work = Screen Format e.g. Security Architecture		Time = Execute Cycle = Machine Cycle e.g. Timing Definition		End = Condition Means = Action e.g. Rule Specification		Builder
DETAILED REPRESENTATIONS (OUT-OF-CONTEXT)													DETAILED REPRESENTATIONS (OUT-OF-CONTEXT)
Sub-Contractor	Ent = Field Rel = Address e.g. DATA		Proc = Control Statement IO = Control Block e.g. FUNCTION		Node = Address Link = Protocol e.g. NETWORK		People = Identity Work = Job e.g. ORGANIZATION		Time = Interrupt Cycle = Machine Cycle e.g. SCHEDULE		End = Sub-condition Means = Step e.g. STRATEGY		Sub-Contractor
FUNCTIONING ENTERPRISE													FUNCTIONING ENTERPRISE

John A. Zachman, Zachman International

April, 2006

(c) Copyright 2003 - 2006 Zachman Framework Associates

Slide 3

Three kinds of Composites

ENTERPRISE ARCHITECTURE - A FRAMEWORK™

	DATA	What	FUNCTION	How	NETWORK	Where	PEOPLE	Who	TIME	When	MOTIVATION	Why	
SCOPE (CONTEXTUAL)	List of Things Important to the Business		List of Processes to be Performed		List of Locations in which the Business Operates		List of Organizations Important to the Business		List of Events/Cycles Significant to the Business		List of Business Goals/Strategies		SCOPE (CONTEXTUAL)
Planner	Entity = Class of Business Thing e.g. Semantic Model		Process = Class of Business Process e.g. Business Process Model		Node = Major Business Location e.g. Business Location System		People = Major Organization Unit e.g. Work-Force Model		Time = Major Business Event/Cycle e.g. Master Schedule		Ends/Means = Major Business Goal/Strategy e.g. Business Plan		Planner
BUSINESS MODEL (CONCEPTUAL)													BUSINESS MODEL (CONCEPTUAL)
Owner	Ent = Business Entity Rel = Business Relationship e.g. Logical Data Model		Proc = Business Process IO = Business Resources e.g. Application Architecture		Node = Business Location Link = Business Linkage e.g. Distributed System Architecture		Work = Work Product e.g. Human Interface Architecture		Time = Business Event Cycle = Business Cycle e.g. Processing Structure		End = Business Objective Means = Business Strategy e.g. Business Rule Model		Owner
SYSTEM MODEL (LOGICAL)													SYSTEM MODEL (LOGICAL)
Designer	Ent = Data Entity Rel = Data Relationship e.g. Physical Data Model		Proc = Application Function IO = User Views e.g. System Design		Node = I/O Function Processor, Storage, etc. Link = Line Characteristics e.g. Technology Architecture		People = Role Work = Deliverable e.g. Presentation Architecture		Time = System Event Cycle = Processing Cycle e.g. Control Structure		End = Structural Assertion Means = Action Assertion e.g. Rule Design		Designer
TECHNOLOGY MODEL (PHYSICAL)													TECHNOLOGY MODEL (PHYSICAL)
Builder	Ent = Segment/Tables/ Rel = Partition/Keys e.g. Data Definition		Proc = Computer Function IO = Data Element/Fields e.g. Program		Node = Hardware/Systems Software Link = Line Specifications e.g. Network Architecture		People = User Work = Screen Format e.g. Security Architecture		Time = Execute Cycle = Machine Cycle e.g. Timing Definition		End = Condition Means = Action e.g. Rule Specification		Builder
DETAILED REPRESENTATIONS (OUT-OF-CONTEXT)													DETAILED REPRESENTATIONS (OUT-OF-CONTEXT)
Sub-Contractor	Ent = Field Rel = Address e.g. DATA		Proc = Control Statement IO = Control Block e.g. FUNCTION		Node = Address Link = Protocol e.g. NETWORK		People = Identity Work = Job e.g. ORGANIZATION		Time = Interrupt Cycle = Machine Cycle e.g. SCHEDULE		End = Sub-condition Means = Step e.g. STRATEGY		Sub-Contractor
FUNCTIONING ENTERPRISE													FUNCTIONING ENTERPRISE

John A. Zachman, Zachman International

April, 2006

(c) Copyright 2003 - 2006 Zachman Framework Associates

Slide 4

■ Framework Rule

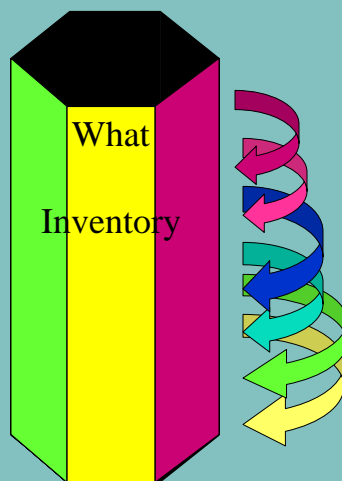
- **“The columns have no order”**
 - Unfortunately the ‘data’ or ‘resource’ or ‘inventory’ column is not first or more important than the others
- **How does one explain that rule ?**
 - Why does every picture I have ever seen always have ‘data’ first ?

April, 2006

(c) Copyright 2003 - 2006 Zachman Framework Associates

Slide 5

■ The Hexagonal Model

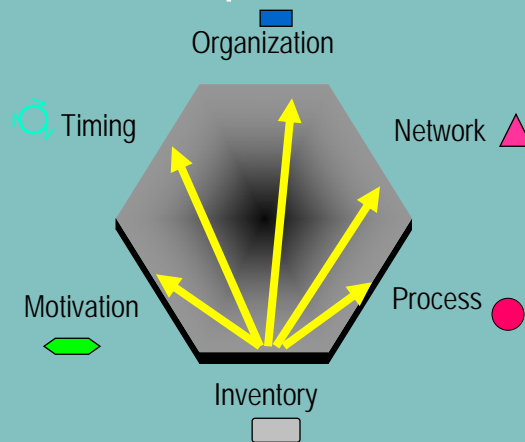


April, 2006

(c) Copyright 2003 - 2006 Zachman Framework Associates

Slide 6

Interconnecting the cells creates integrated viewpoint



April, 2006

(c) Copyright 2003 - 2006 Zachman Framework Associates

Slide 7

Integration ~ Ensures Quality

- 15 Matrices (if no relationship direction)
 - Completeness
 - Leveling
 - Pattern Emergence
- 30 Matrices (if relationships have direction)
 - Completeness
 - Leveling
 - Pattern Emergence

April, 2006

(c) Copyright 2003 - 2006 Zachman Framework Associates

Slide 9

Column Integrations

o	c1	c2	c3	c4	c5	c6
c1	c1-c1	c1-c2	c1-c3	c1-c4	c1-c5	c1-c6
c2	c2-c1	c2-c2	c2-c3	c2-c4	c2-c5	c2-c6
c3	c3-c1	c3-c2	c3-c3	c3-c4	c3-c5	c3-c6
c4	c4-c1	c4-c2	c4-c3	c4-c4	c4-c5	c4-c6
c5	c5-c1	c5-c2	c5-c3	c5-c4	c5-c5	c5-c6
c6	c6-c1	c6-c2	c6-c3	c6-c4	c6-c5	c6-c6

April, 2006

(c) Copyright 2003 - 2006 Zachman Framework Associates

Slide 10

Zachman Topics

Implementation

however ...

April, 2006

(c) Copyright 2003 - 2006 Zachman Framework Associates

Slide 33

Framework Rule

- **“Excruciating detail is a characteristic of a cell not the column”**
 - The framework is not decomposition from row to row but transformation from row to row
- **How does one explain that rule ?**
 - Why does every picture I have ever seen always have Scope at the top and Detailed Representation at the bottom ?

April, 2006

(c) Copyright 2003 - 2006 Zachman Framework Associates

Slide 34

Framework Rule

- **components may only be related within a cell, transformed in a column from one row to the next or integrated across the columns in a single row**
 - The framework demands the holistic view of the implementation through the integration of primitives
- **How does one explain this rule ?**
 - Diagonal moves on the framework are not permitted

April, 2006

(c) Copyright 2003 - 2006 Zachman Framework Associates

Slide 35

Primitives and Composites

- No Diagonal moves on Framework
- The place of objects in Architecture
- What's next in the object world

April, 2006

(c) Copyright 2003 - 2006 Zachman Framework Associates

Slide 36

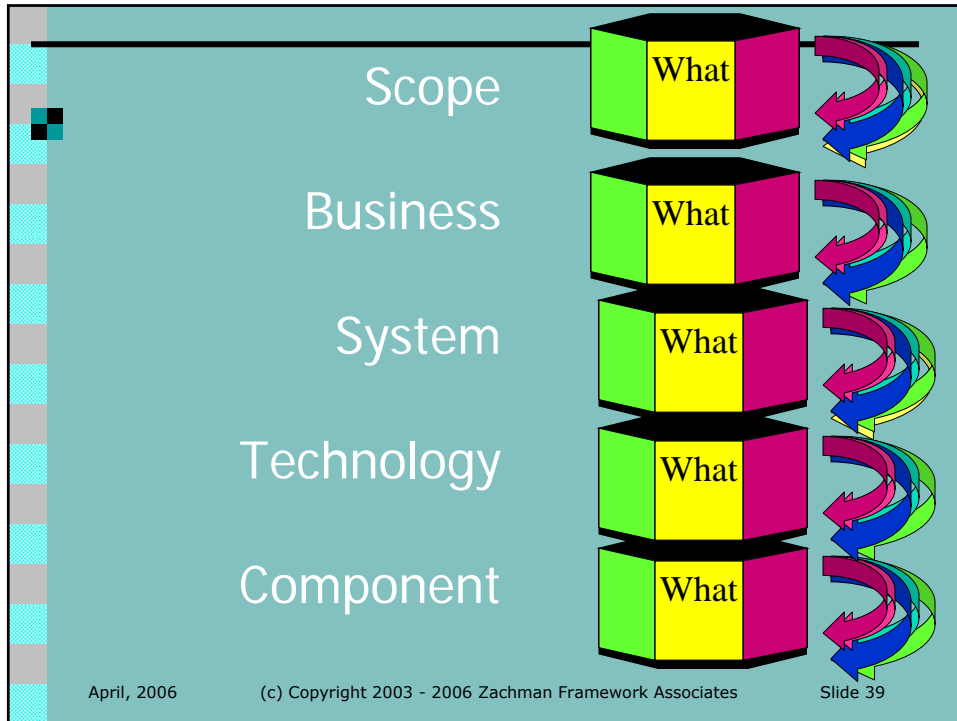
The Diagonal Move

	What	How	Where	Who	When	Why
Scope						
Business						
System						
Technology						
Component						
Operations						

April, 2006

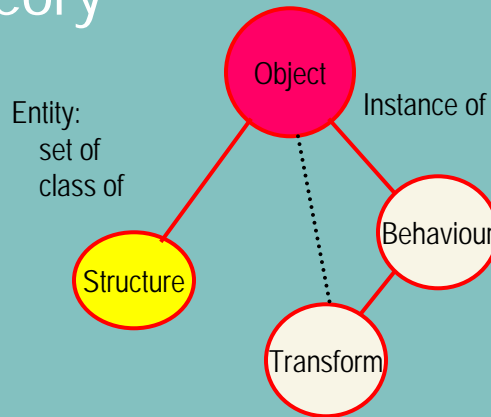
(c) Copyright 2003 - 2006 Zachman Framework Associates

Slide 37



- Objects are integrations
 - Assemblies involve more than 1 cell
 - Often traverse over the rows
 - Are implementation mechanisms
- April, 2006 (c) Copyright 2003 - 2006 Zachman Framework Associates Slide 50

Classic (Business) Object Theory

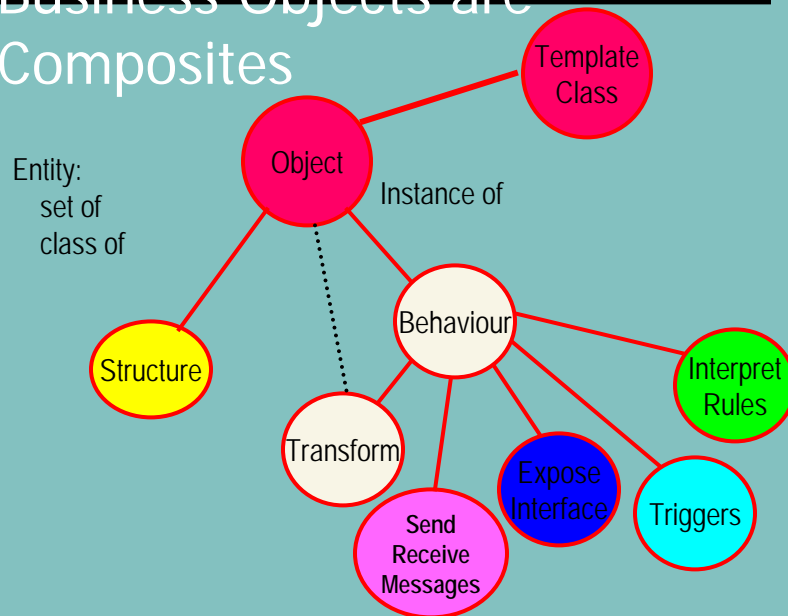


April, 2006

(c) Copyright 2003 - 2006 Zachman Framework Associates

Slide 51

Business Objects are Composites



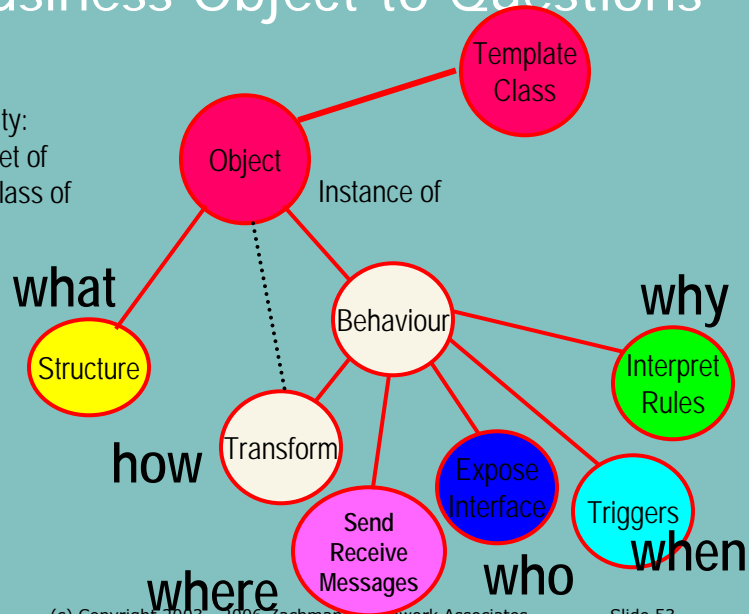
April, 2006

(c) Copyright 2003 - 2006 Zachman Framework Associates

Slide 52

Business Object to Questions

Entity:
set of
class of



April, 2006

(c) Copyright 2003 - 2006 Zachman Framework Associates

Slide 53

Where are the Object Primitives

Entity Class

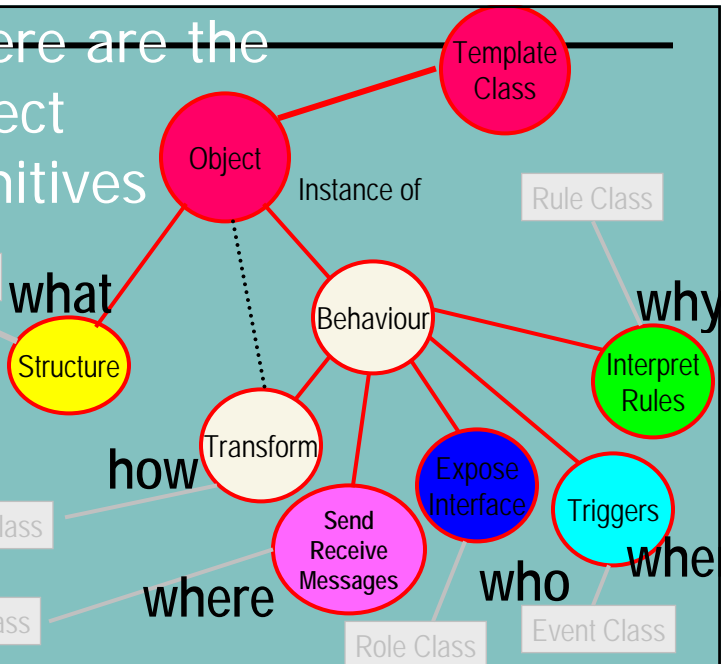
Transform Class

Message Class

Rule Class

Role Class

Event Class



April, 2006

(c) Copyright 2003 - 2006 Zachman Framework Associates

Slide 54



Implementation

Is all about assembly of things ...
from component pieces

April, 2006

(c) Copyright 2003 - 2006 Zachman Framework Associates

Slide 55