LECTURE 02

ZACHMAN FRAMEWORK FOR ENTERPRISE ARCHITECTURE

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Outline

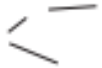
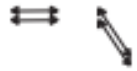
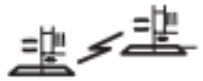
- Zachman framework for enterprise architecture
- Primitives & Composites
- High Level View of Framework
- Identifying reusable priority areas

Zachman Framework for Enterprise Architecture

We Need Strategic Focus

Using Today's Design Focus

To Build These …

	DATA What	FUNCTION How	NETWORK Where	PEOPLE Who	TIME When	MOTIVATION Why	
OBJECTIVES/ SCOPE (CONTEXTUAL) Planner	List of Things Important to the Business  Entity = Class of Business Thing	List of Processes the Business Performs  Function = Class of Business Process	List of Locations in Which the Business Operates  Node = Major Business Location	List of Organizations Important to the Business  People = Class of Agent	List of Events Significant to the Business  Time = Major Business Event	List of Business Goals/Strat.  Ends/Means = Major Bus. Goal/ Critical Success Factor	OBJECTIVES/ SCOPE (CONTEXTUAL) Planner
ENTERPRISE MODEL (CONCEPTUAL) Owner	e.g. Semantic Model  Ent. = Business Entity Reln. = Business Relationship	e.g. Business Process Model  Proc. = Business Process I/O = Business Resources	e.g. Logistics Network  Node = Business Location Link = Business Linkage	e.g. Work Flow Model  People = Organization Unit Work = Work Product	e.g. Master Schedule  Time = Business Event Cycle = Business Cycle	e.g. Business Plan  End = Business Objective Means = Business Strategy	ENTERPRISE MODEL (CONCEPTUAL) Owner
SYSTEM MODEL (LOGICAL) Designer	e.g. Logical Data Model  Ent. = Data Entity Reln. = Data Relationship	e.g. Application Architecture  Proc. = Application Function I/O = User Views	e.g. Distributed System Architecture  Node = I/S Function (Processor, Storage, etc.) Link = Line Characteristics	e.g. Human Interface Architecture  People = Role Work = Deliverable	e.g. Processing Structure  Time = System Event Cycle = Processing Cycle	e.g. Business Rule Model  End = Structural Assertion Means = Action Assertion	SYSTEM MODEL (LOGICAL) Designer
TECHNOLOGY MODEL (PHYSICAL) Builder	e.g. Physical Data Model Ent. = Table/Segment, etc. Reln. = Key/Pointer, etc.	e.g. System Design Proc. = Computer Function I/O = Data Elements/Sets	e.g.Technology Architecture  Node = Hardware/System Software Link = Line Specifications	e.g. Presentation Architecture  People = User Work = Screen Format	e.g. Control Structure  Time = Execute Cycle = Component Cycle	e.g. Rule Design  End = Condition Means = Action	TECHNOLOGY CONSTRAINED MODEL (PHYSICAL) Builder
DETAILED REPRESEN-TATIONS (OUT-OF-CONTEXT) Sub-Contractor	e.g. Data Definition  Ent. = Field Reln. = Address	e.g. Program  Proc. = Language Stmt I/O = Control Block	e.g. Network Architecture  Node = Addresses Link = Protocols	e.g. Security Architecture  People = Identity Work = Job	e.g. Timing Definition  Time = Interrupt Cycle = Machine Cycle	e.g. Rule Specification  End = Sub-condition Means = Step	DETAILED REPRESEN-TATIONS (OUT-OF CONTEXT) Sub-Contractor
FUNCTIONING ENTERPRISE	e.g. DATA	e.g. FUNCTION	e.g. NETWORK	e.g. ORGANIZATION	e.g. SCHEDULE	e.g. STRATEGY	FUNCTIONING ENTERPRISE

John A. Zachman, Zachman International

Primitives & Composites

John Zachman addressing the six primitives

- What – How - Where
- Who – When -Why

And very complex composites such as

- Buildings
- Planes
- Enterprise systems

Usability Principle

“The IT industry has tried to build reusable code or components by using object-oriented methods. But we have not been particularly successful to date. We do use O-O to build reusable components for screen design and other systems components. But we have not been very successful using O-O methods to identify many reusable activities and processes within an enterprise. Enterprise reusability is only achieved effectively by taking an enterprise-wide approach: not in detail across the enterprise, but broadly to encompass the whole enterprise.”

Horizontal Slice

	What Data	How Function	Where Location	Who People	When Time	Why Future
PLANNER Objectives/Scope	List of Things	List of Processes	List of Locations	Org Structure	List of Events	List of Goals/Obj
OWNER Conceptual	Enterprise Model	Activity Model	Business Logistics	Work Flow	Master Schedule	Business Plan
DESIGNER Logical	Logical Data Model	Process Model	Distrib. Architect.	Human Interface	Process Structure	Business Rules
BUILDER Physical	Physical Data Model	System Model	Technol. Architect.	Presn Interface	Control Structure	Rule Design
SUBCONTRACTOR Out-of-Context	Data Definition	Program	Network Architect.	Security Interface	Timing Definition	Rule Specs
FUNCTIONING ENTERPRISE	Data	Function	Network	Organization	Schedule	Strategy

Readings & References

1. Read and Prepare given Handouts
2. Chapter-1, Topic 1.2 : Enterprise Architecture for Integration: Rapid Delivery Methods and Technologies by Clive Finkelstein

Good Luck ☺