Setting vendor-neutral
software standards, and
enabling distributed,
enterprise-wide interoperability
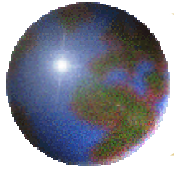
OMG Enterprise Collaboration Architecture (ECA)

Cory Casanave
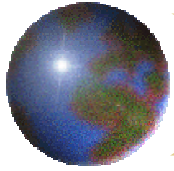Data Access Technologies
www.d-a-t.com

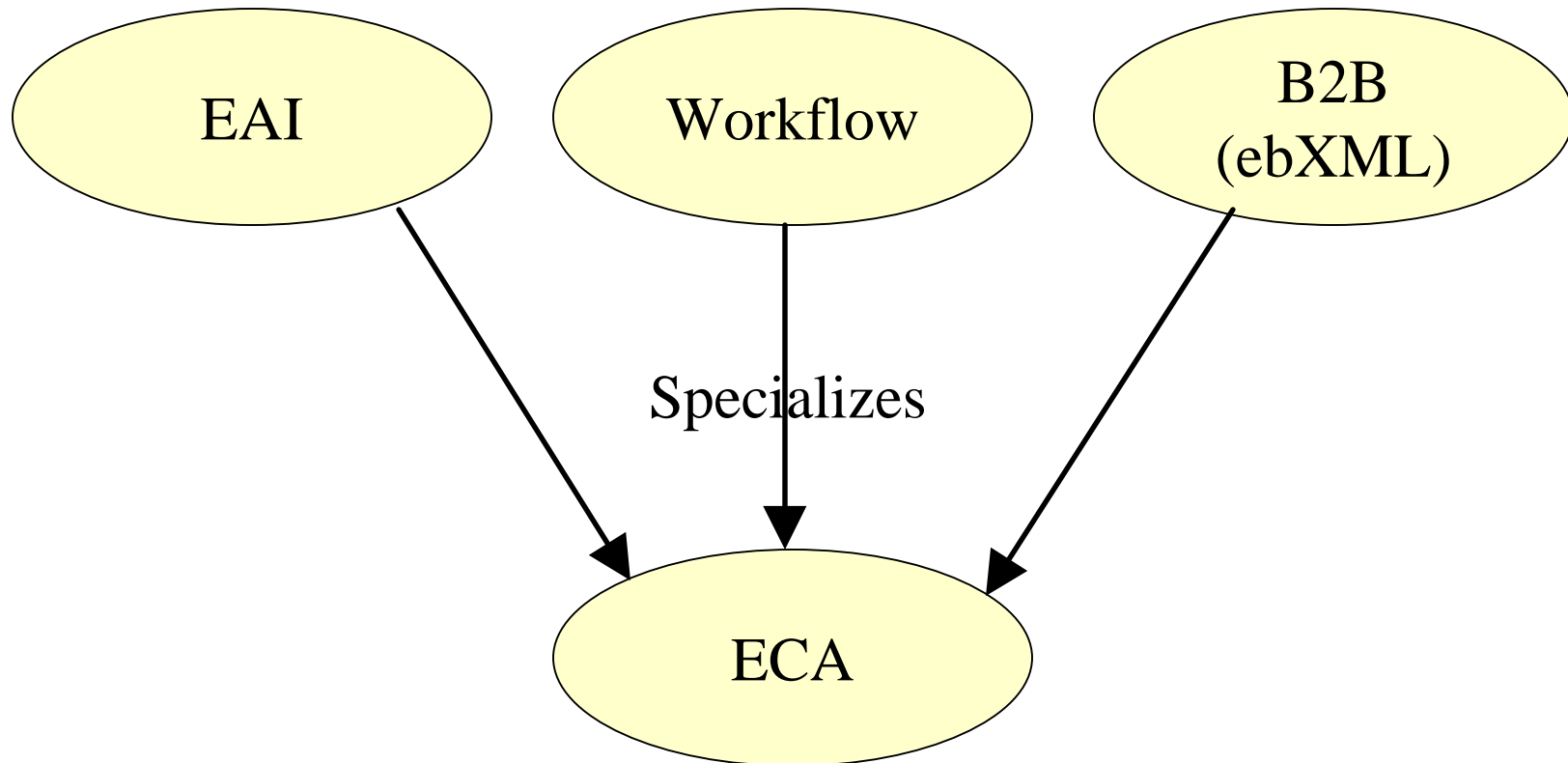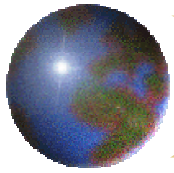Creating A Single Global Electronic Market

What is in ECA?

- Patterns
- Process
- Entities
- Events
- Component Collaboration Architecture (CCA)
  - Recursive Components
  - Data flow & Protocols
  - Composition
  - Document Model
- All based on UML
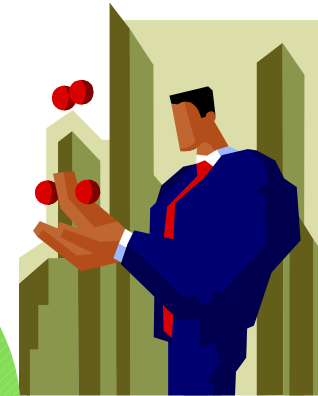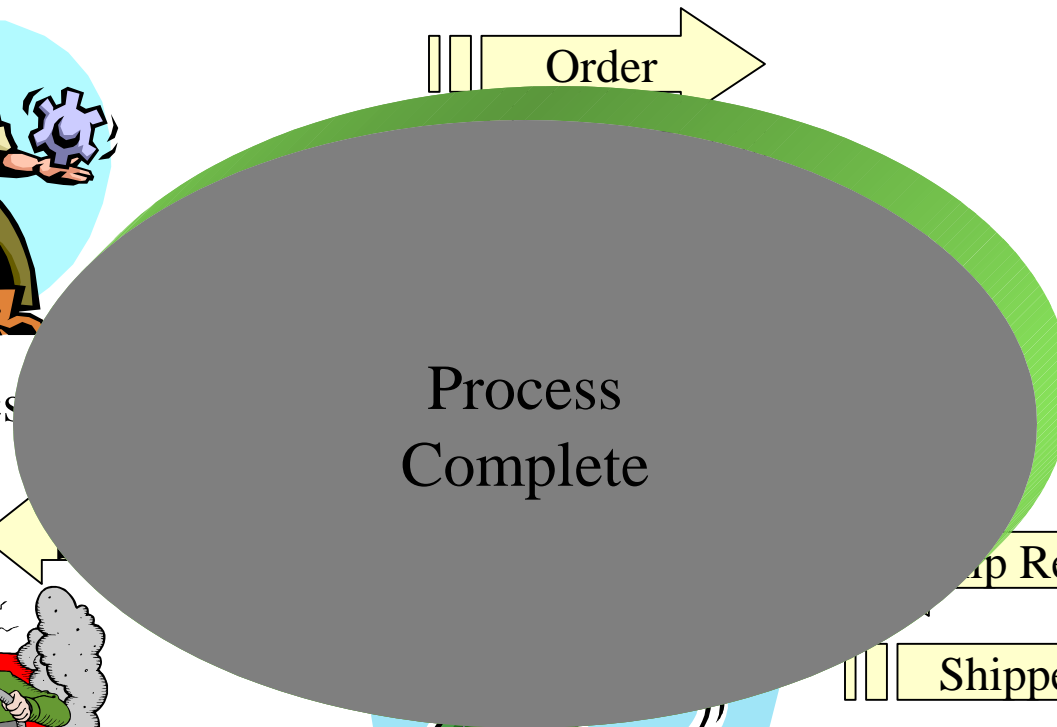
ECA as a common architecture

```
    ┌─────────┐        ┌───────────┐        ┌───────────┐
    │   EAI   │        │  Workflow │        │    B2B    │
    │         │        │           │        │  (ebXML)  │
    └────┬────┘        └─────┬─────┘        └─────┬─────┘
         │                   │                    │
         │              Specializes               │
         │                   │                    │
         └──────────┐        ▼        ┌───────────┘
                    ▼    ┌───────┐    ▼
                         │  ECA  │
                         └───────┘
```
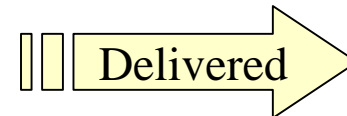
The Marketplace Example

Order

Mechanics Buyer

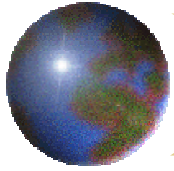Process Complete

Acme Industries Seller

Ship Req

Shipped

Delivered

Physical Delivery
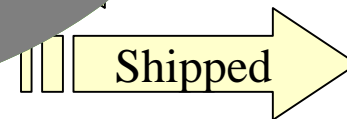
GetItThere Freight Shipper

The Seller's Detail

Order

Conformation
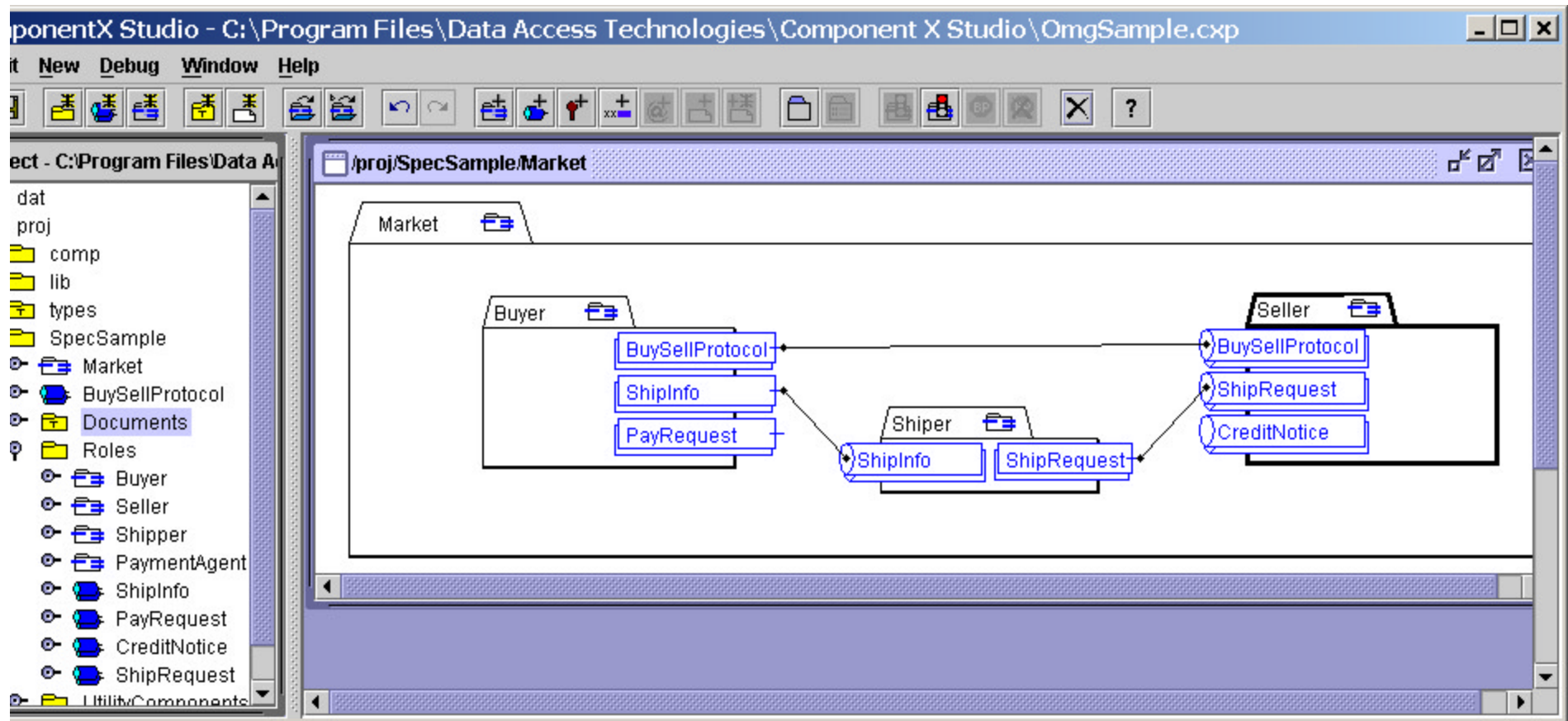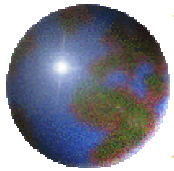
Shipped

Ship Req

Shipped

Delivered

Order Processing

Shipping

Receivables

Event
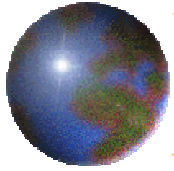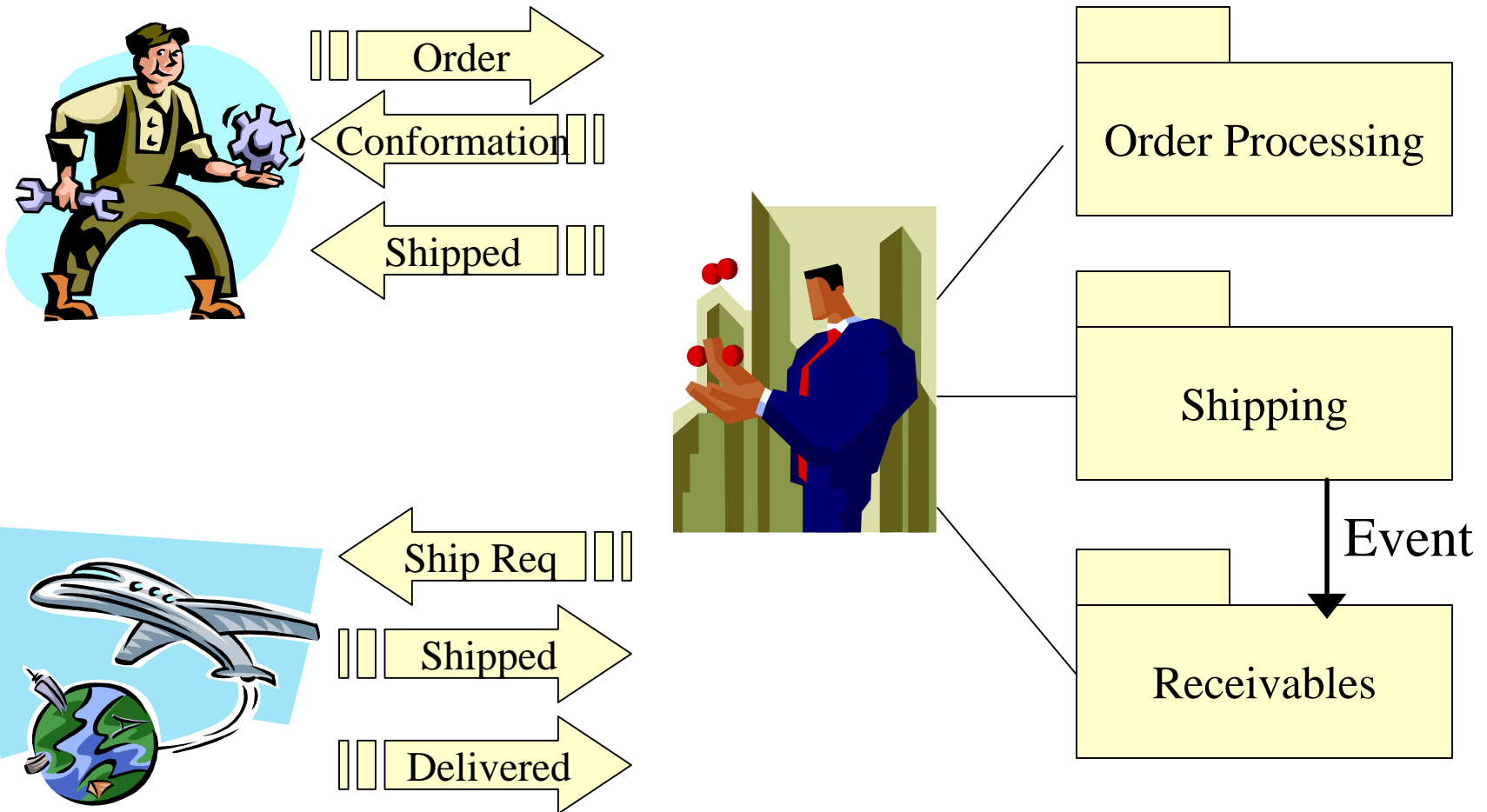
Apply Order Process Pattern

Order Process

Buyer

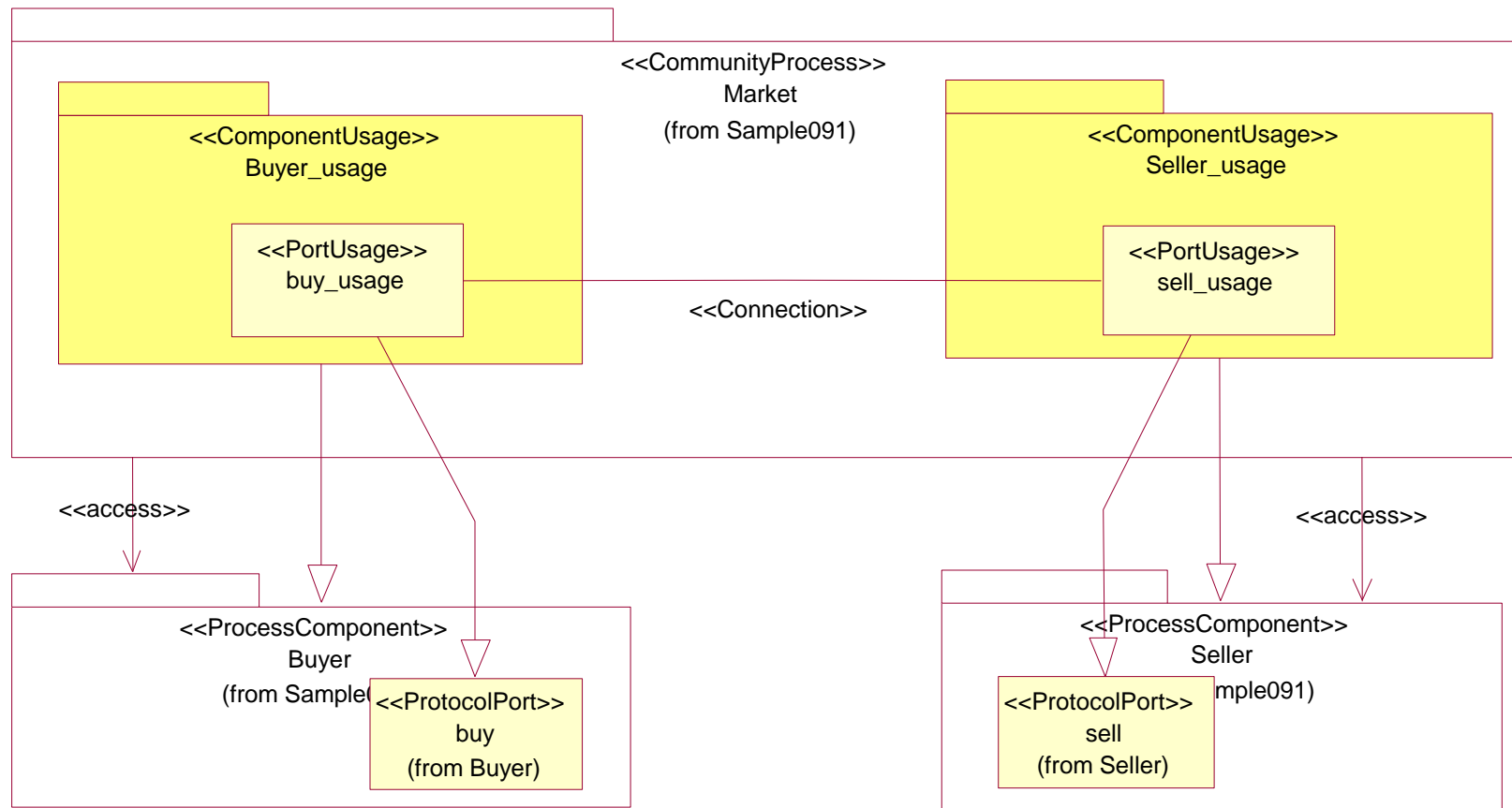Customer

Seller

Supplier

Receiver

Shipper Process

Sender

Shipper

Shipper
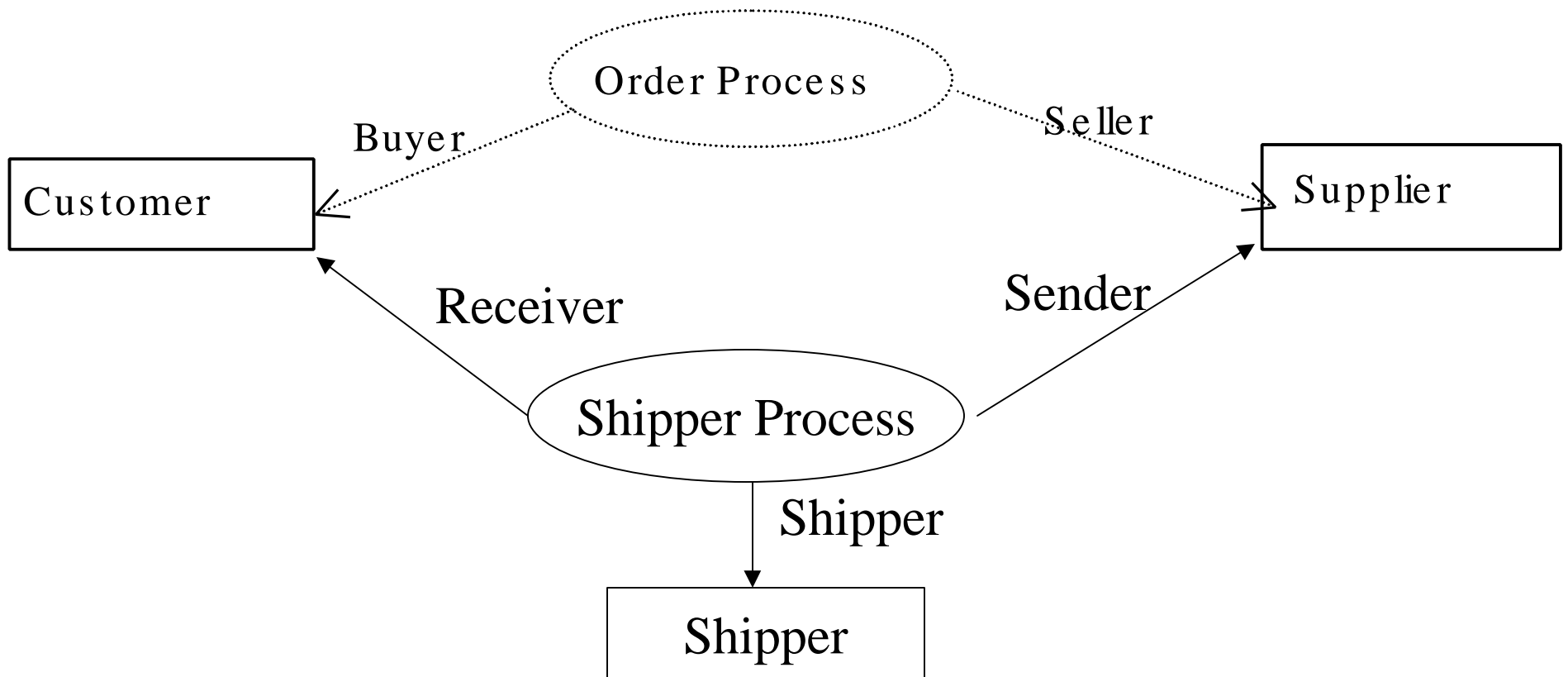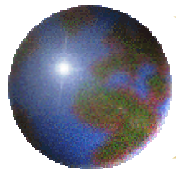
Community Process

UML Notation

<<CommunityProcess>>
Market
(from Sample091)

<<ComponentUsage>>
Buyer_usage

<<PortUsage>>
buy_usage

<<Connection>>

<<ComponentUsage>>
Seller_usage

<<PortUsage>>
sell_usage

<<access>>

<<access>>

<<ProcessComponent>>
Buyer
(from Sample

<<ProtocolPort>>
buy
(from Buyer)

<<ProcessComponent>>
Seller
mple091)

<<ProtocolPort>>
sell
(from Seller)
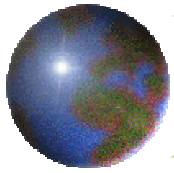
Activity Diagram for Process

buy	Seller_Quote_ usage	Seller_Order_ usage	Seller_ShippingNotice _usage	Seller_PaymentNotice _usage

Sales_buy

Quote_buy → Quote_sell

Order_buy → Order_sell

[OrderCancelled]

Failure

[OrderConfirmation]

ShippingNotice_buy ← ShippingNotice_sell

PaymentNotice_buy → PaymentNotice_sell

Success
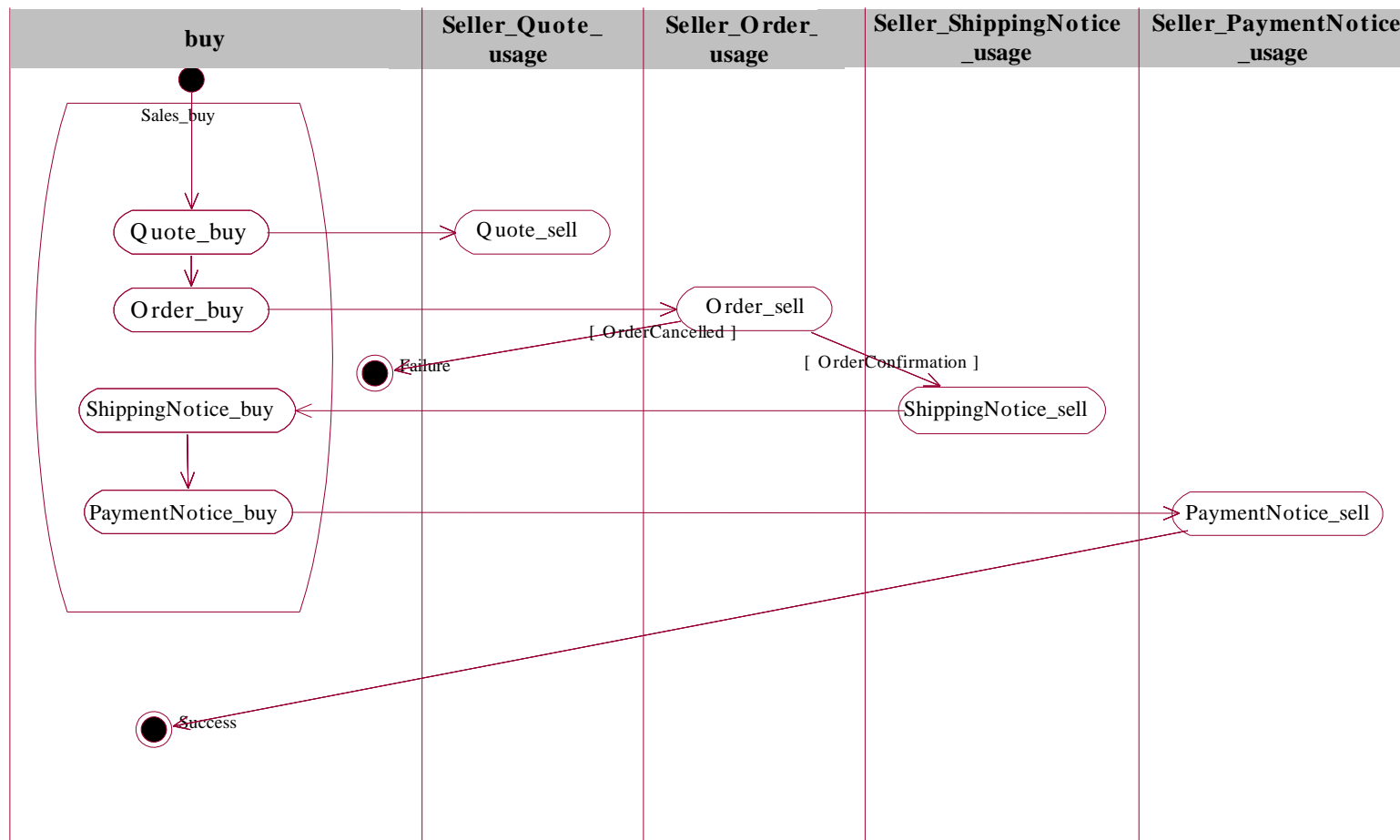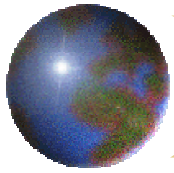
Activity diagram shows protocol

Protocol OrderBT

buy_role_Order | sell_role_Order

Protocol

ProtocolRole (initiator)

ProtocolRole

Start

Sending ProtocolMessage

Receiving ProtocolMessage

Order

ProtocolMessages

OrderConfirmation

TerminateSuccess

Success

OrderDenied

TerminateFailure

Failure
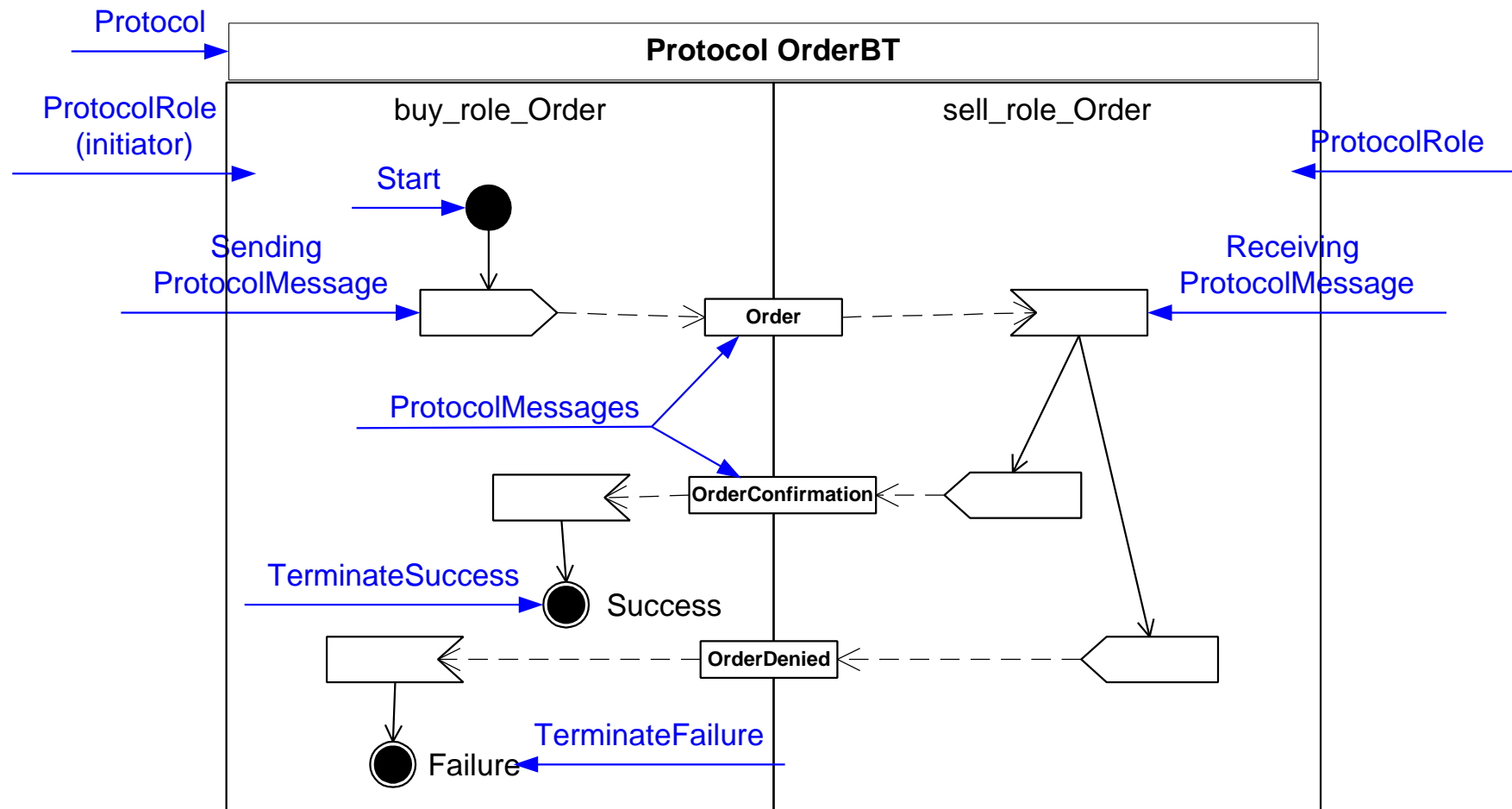
Drill down to sub-components & Activities
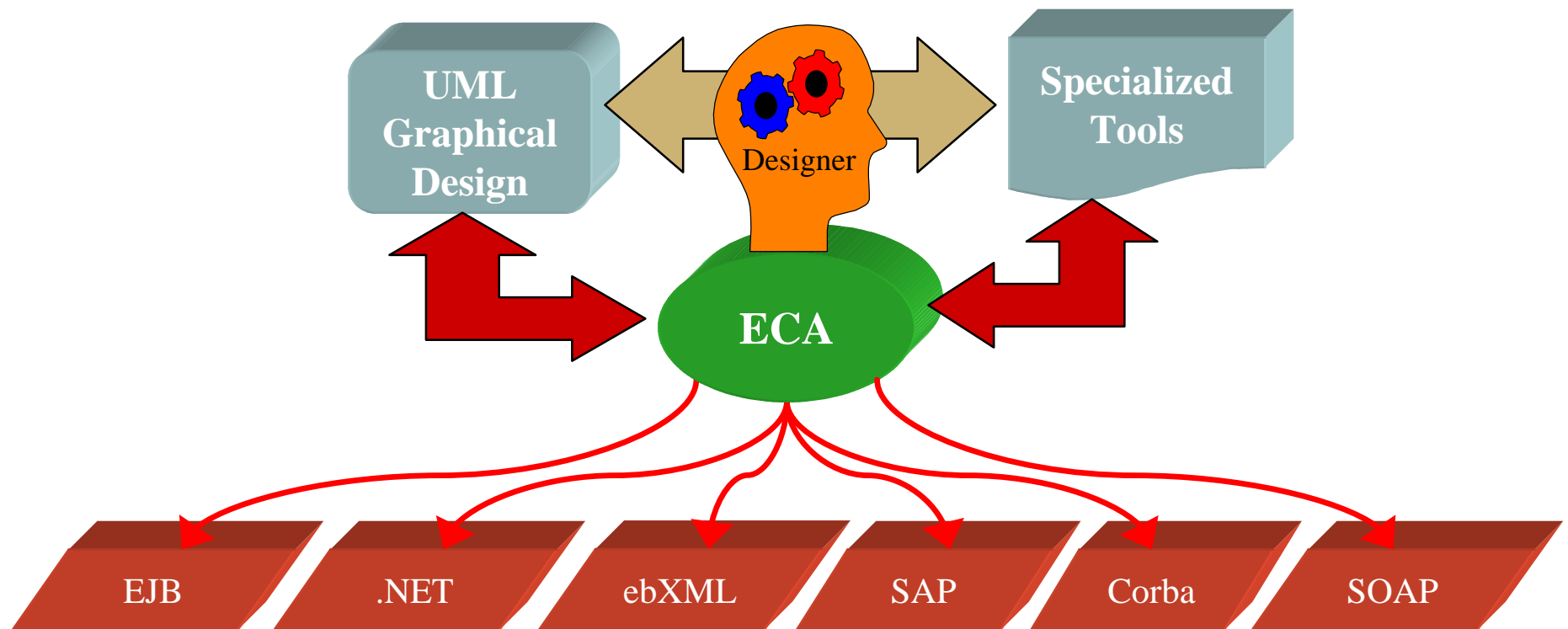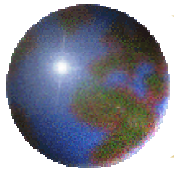

Drag and drop
Executable
Process Components
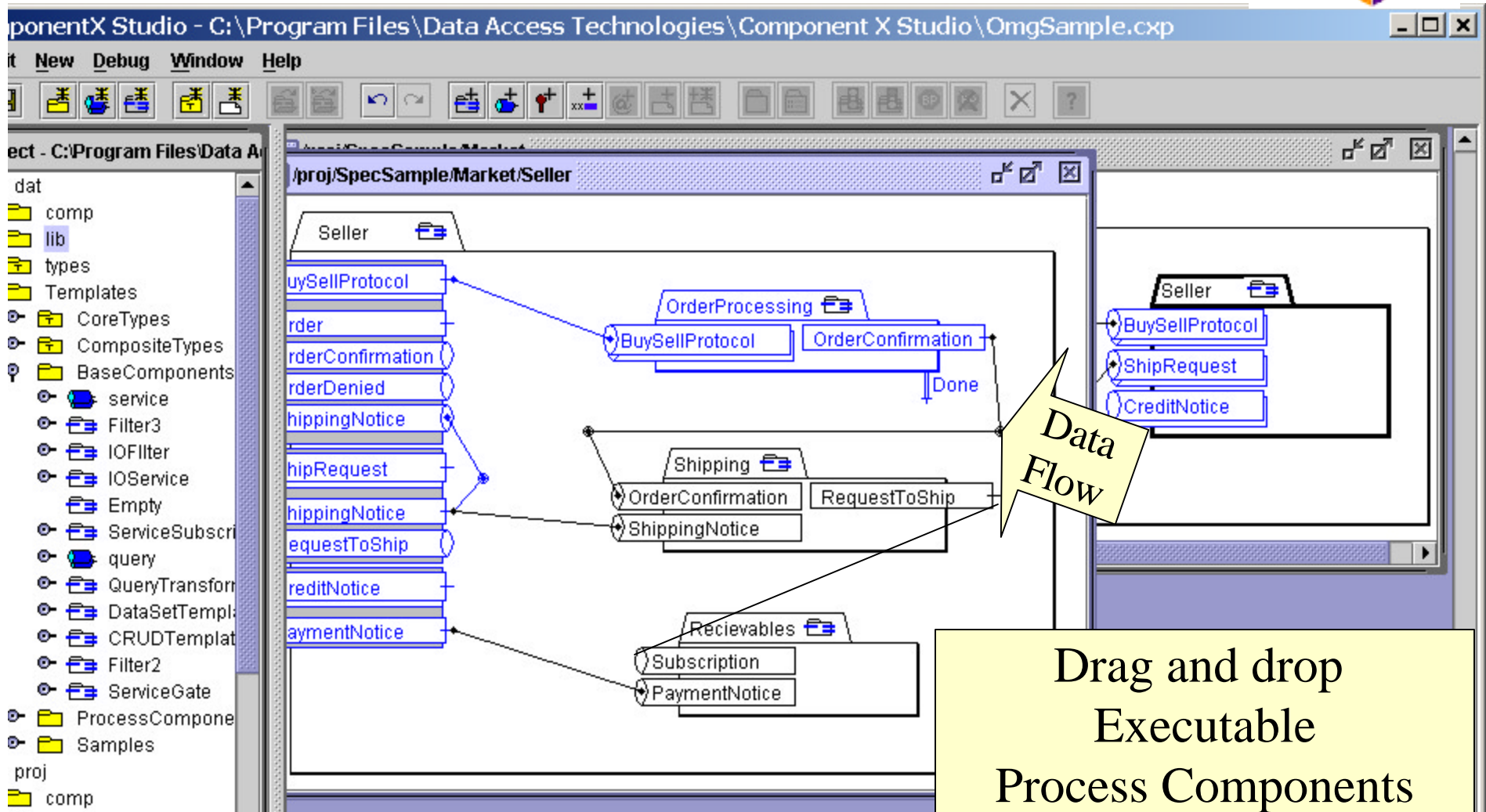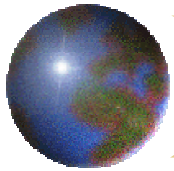
Recursive Composition
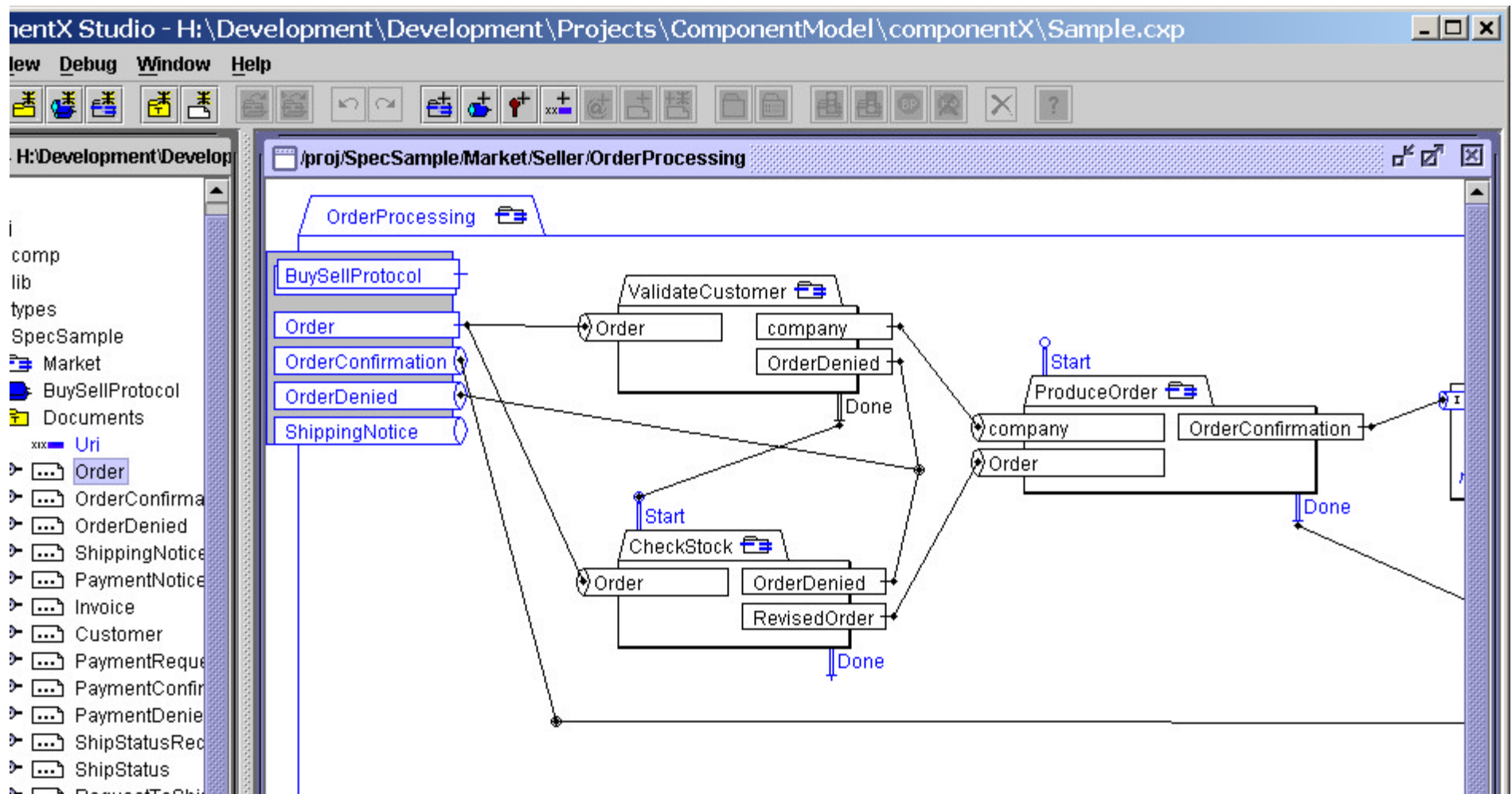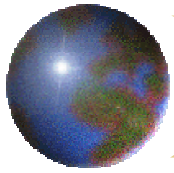
Technology Independence

Automated Model Based Design

ECA Design

Infrastructure Mapping

(E.G. EJB)

Tools Produce & Integrate

Enterprise Components

Framework & Infrastructure (E.G. EJB

Manual Coding

Mapping is tuned to the infrastructure
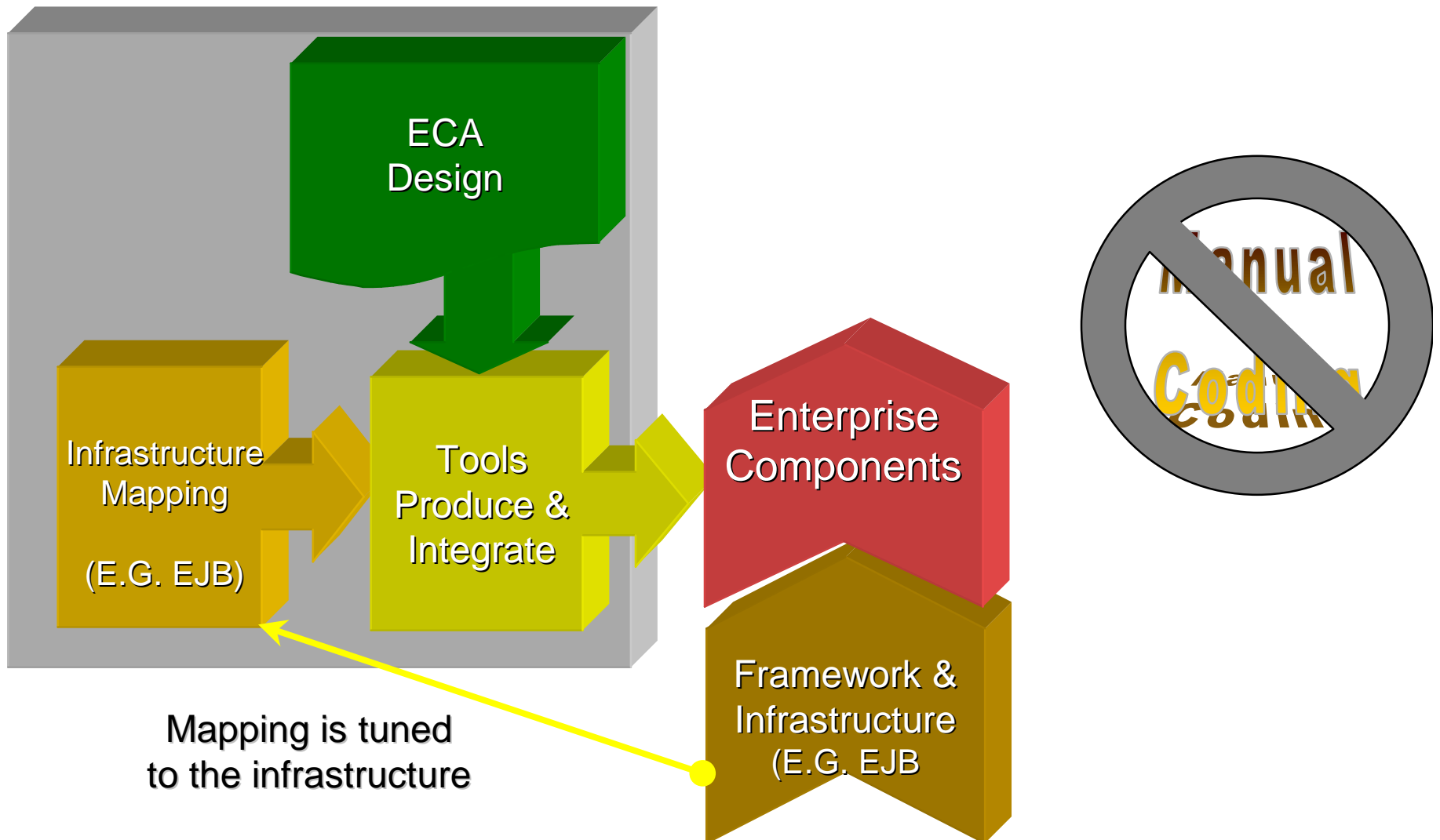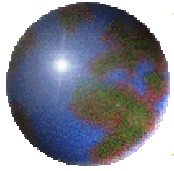
Integration of Viewpoints