

# COMP 3410 – I.T. in Electronic Commerce

## eTrading 1. Conceptual Foundations

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[http://www.rogerclarke.com/EC/ ...](http://www.rogerclarke.com/EC/)

ETIntro.html, OhdsET1.ppt

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# eTrading

The transfer of tradable items  
from entities that have them  
to entities that want them  
with the support of telecomms-based tools

## Market

A mechanism for the transfer of tradable items, from entities that have them, to entities that want them

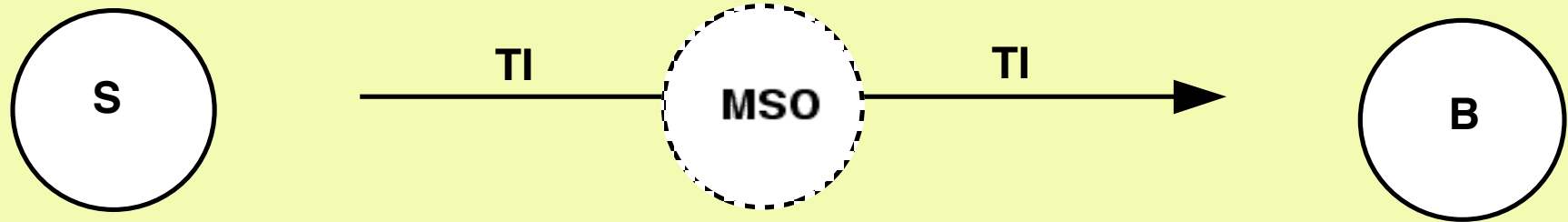
## Marketplace

A physical location and associated processes

## Marketspace

The virtual context in which entities **discover** one another and **transact** business

# Market Participants



Tradable Item TI

Seller S

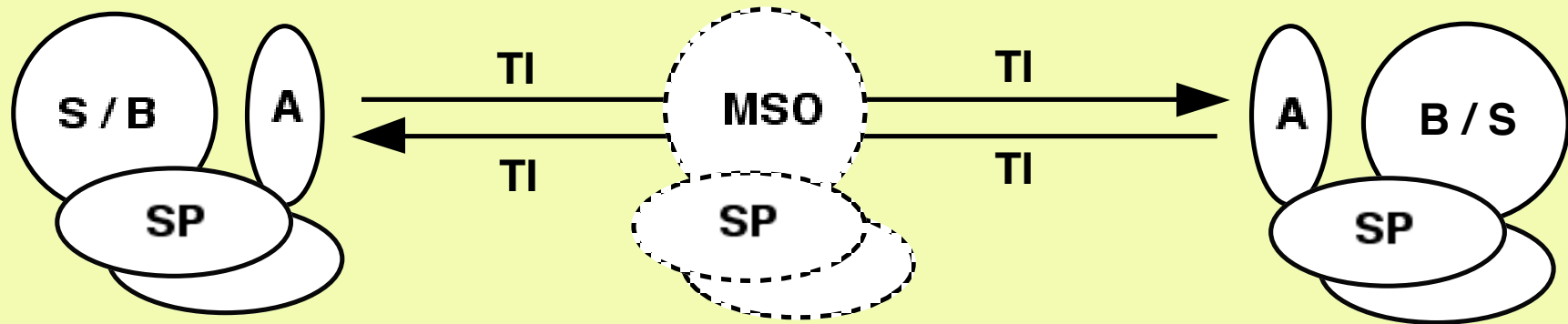
Marketplace Operator MSO

Buyer B

Business Processes

Infrastructure

# Market Participants



Sellers / Buyers  
Agents A

Tradable Items  
MarketSpace Operator  
Service Providers SP

Buyers / Sellers  
Agents A

Business Processes

Infrastructure

# Market Phases

- **Discovery**
  - Tradable Item
  - Other Party
- **Negotiation**
  - Price
  - Terms
- **Contract Formation**
- **Delivery / Performance / Settlement**

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  - **Discovery**
    - Tradable Item
    - Other Party
  - **Negotiation**
    - Price
    - Terms
  - **Contract Formation**
  - **Delivery / Performance / Settlement**
- Accounting for Successive Usages
- Enforcement and Recourse

# Categories of Tradable Items

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- **Degree of Productisation**
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  - **Customised**      Installed Package Software
  - **Productised**      Car Parts and Accessories
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# Price-Setting Mechanisms

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  - Shop Point-of-Sale
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# Price-Setting Mechanisms

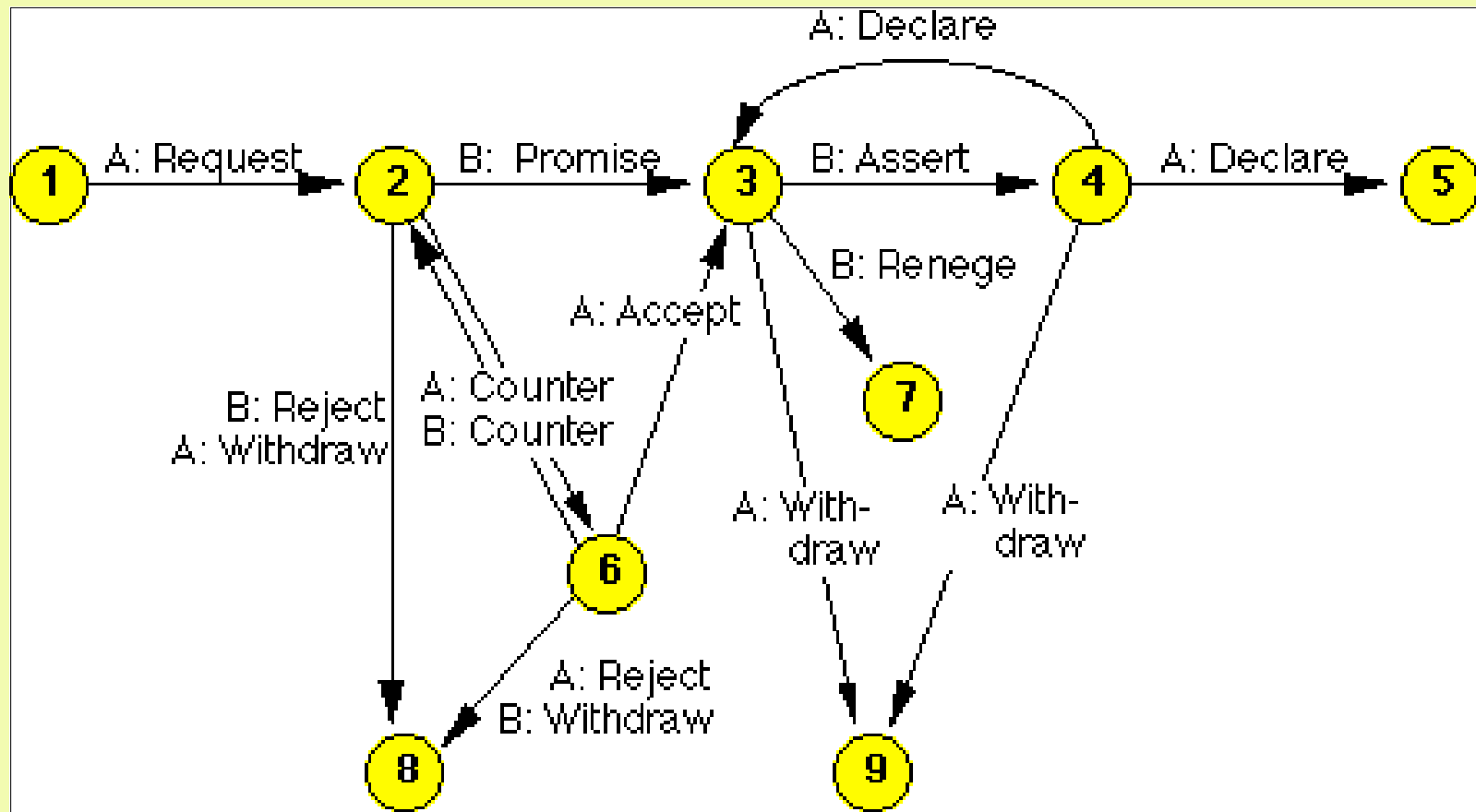
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- **Balanced Negotiation Process**

# Negotiation

e.g. Speech Acts Theory



# What Marketspace Operators Offer

- **Mutual Discovery** of opportunities
- **'Fungibility'**  
exchangeability of traded items
- **Market Depth**  
numbers of buyers, and of sellers
- **Market Reach**  
geographical extent of participation

# Risks in Marketspaces

- **Default by:**
  - Seller
  - Buyer
  - Agent
  - Service-Provider
  - Marketplace Operator
- **Quality of:**
  - Tradable Item
  - Fulfilment

# Categories of Buyer-Seller Relationships

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- **B2C:** sale by a Business to a 'Consumer'
- **C2C:** sale by a 'Consumer' to a 'Consumer'
- **B2B:** sale by a Business to another Business
  - for consumption
  - as a factor of production
  - as capital goods / fixed asset

Business Enterprise Categories:

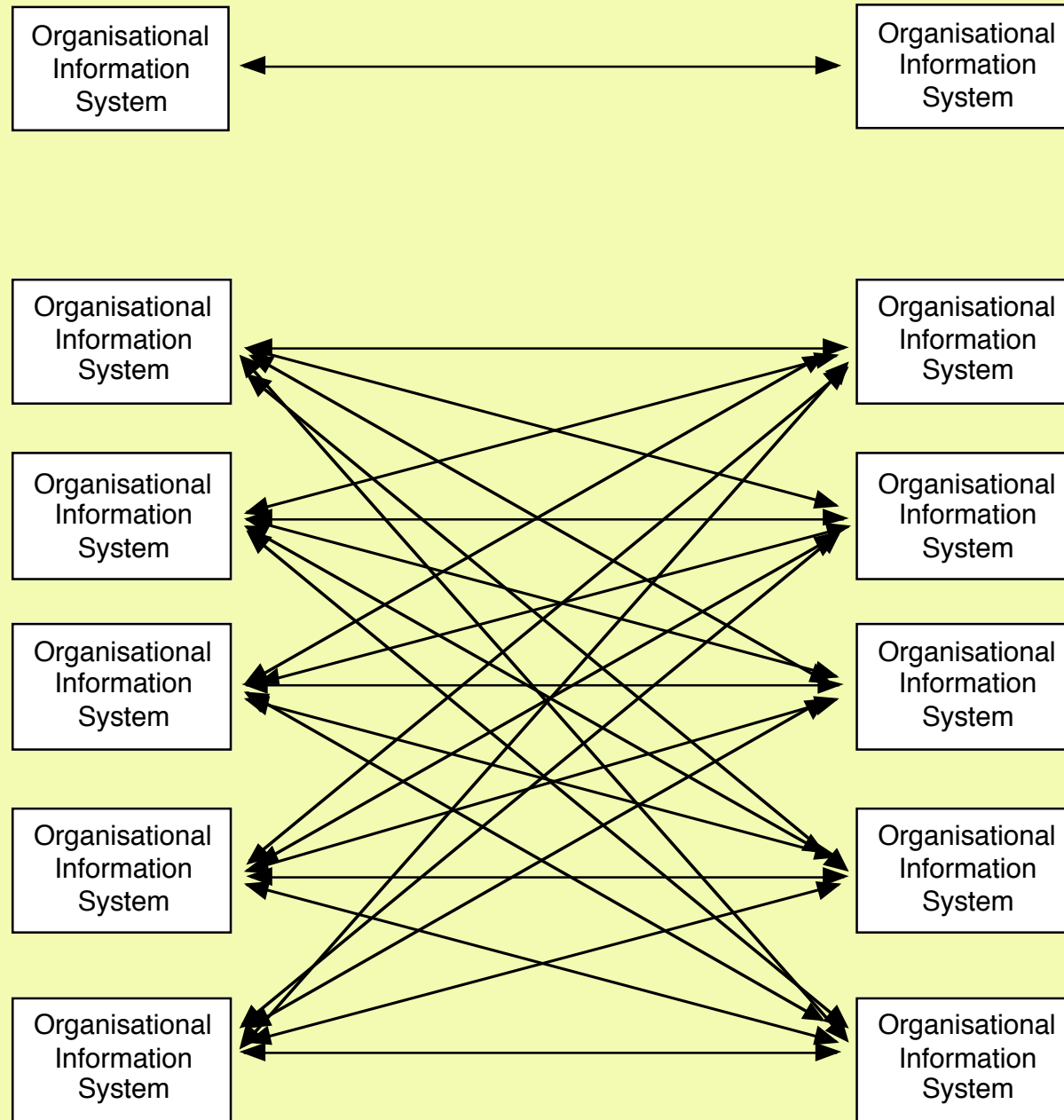
$\mu$ , SE, ME, LE, conglomerate, multinational

- **B2G:** sale by a Business to a Government agency

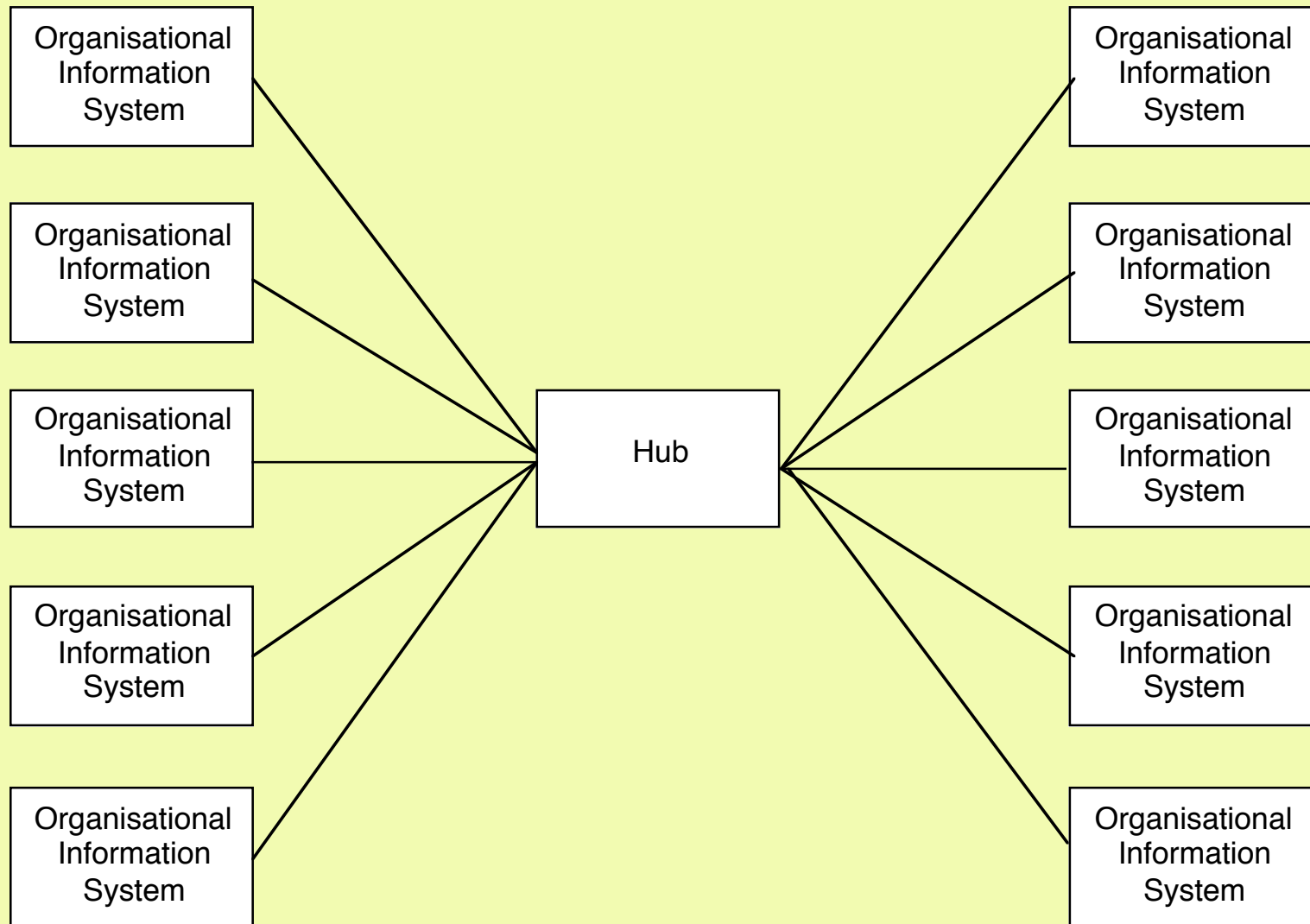
# Categories of Buyer-Seller Topology

- **Inter-Organisational Systems (1-to-1)**
- **Multi-Organisational Systems:**
  - networking (m-to-n) systems
  - hub-and-spoke (1-to-n) systems
  - cascading (1-to-1-to-1) systems
- **Extra-Organisational Systems**
- **Brokered Systems ( (1-to-1)-to-(1-to-1) )**

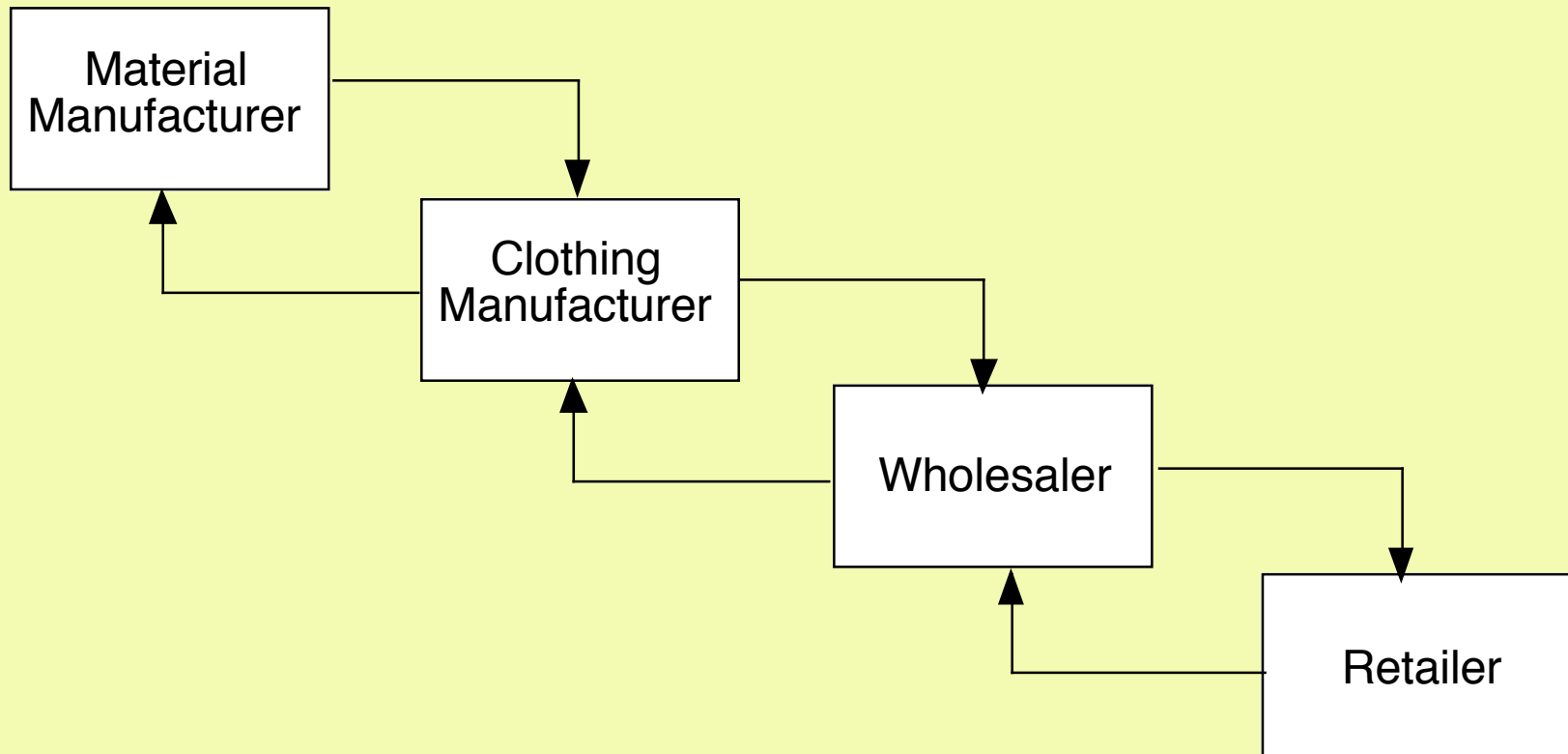
# Inter- and Multi-Organisational Systems



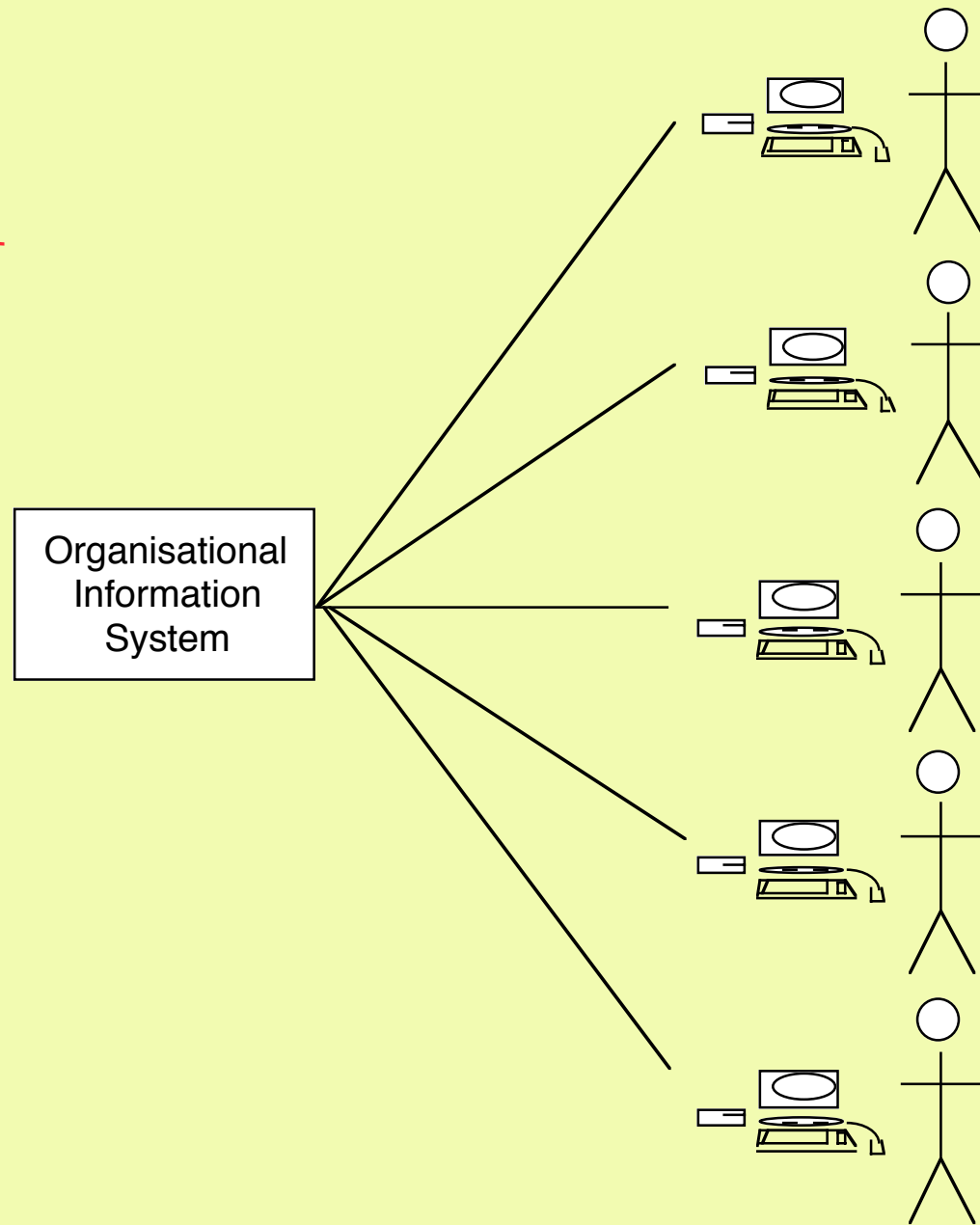
# Hub and Spoke Systems



# Cascading Systems



# Extra-Organisational Systems



# Categories of Commercial Arrangements

## Alternative Motivations for the Transfer

- **Sale** – tradable item exchanged for money
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- **Subscription** (period, pre-paid, site licence)  
tradable items available, in return for a bulk payment
- **Lending** – money for the promise of money
- **Sponsor-funded**  
ads, public services, vanity press, freeware

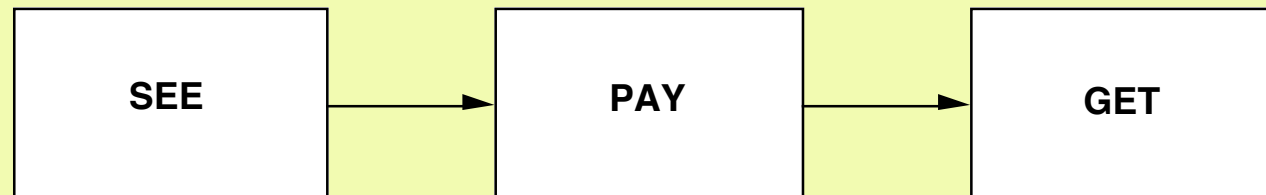




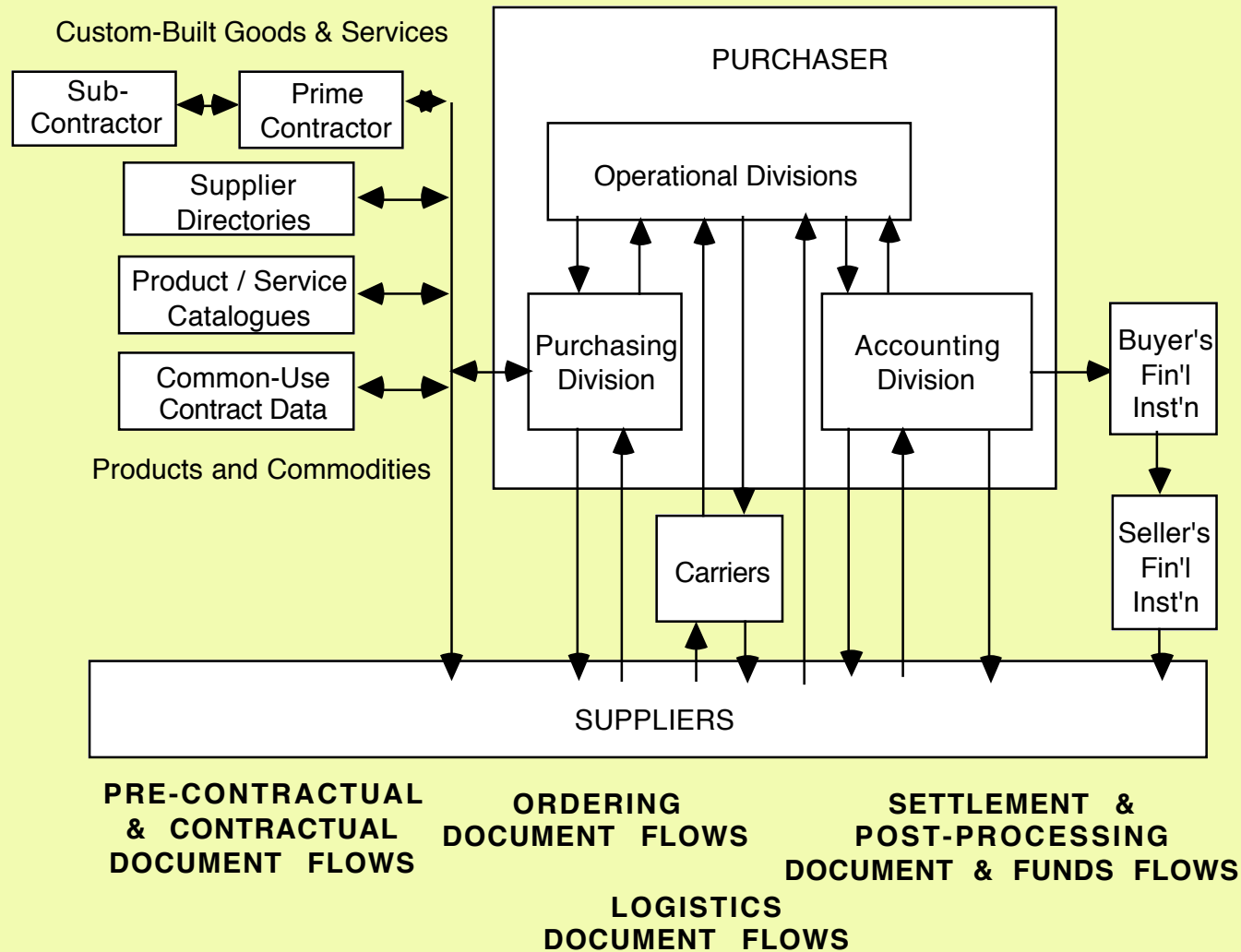
# Direct Exchange Markets, Other Markets

- **Exchange of Value** 'horse-trading'  
**Direct**  
**Immediate**  
**Reciprocal**
- **One-Sided Transfer, Without Compensation**  
donation, the 'gift economy'
- **Reciprocity, BUT Indirect and/or Deferred**  
'barn-raising', 'cooking pot', 'honey-pot'  
'shareware', 'open source software'

# Spontaneous Procurement Process



# Deliberative Procurement Process



# Auction Process

## A Definition

A particular kind of trading process  
where price is the key factor to be negotiated  
and offers are simple, stating price, perhaps quantity

Auctions are particularly applicable to commodities  
(i.e. undifferentiated goods and services)

## 'An English Auction'

- The Auctioneer identifies the 'Lot'
- The Auctioneer seeks an Opening Bid
- Bidders successively make higher Bids
- The Auctioneer stimulates more Bids
- The Auctioneer warns that time is expiring
- The Auctioneer 'knocks down' to the last Bidder

# Common Categories of Auction

- **English Auction** (price runs up, last bid wins, excitement is built in to help the organiser, may be subject to a 'reserve price')
- **Dutch Auction** (price runs down, first bid wins, forces a motivated buyer to bid early and high)
- **Sealed Bid Auction** (bids non-visible, time-limited, competition helps the organiser)
- **Clearinghouse Auction / Exchange** (both sellers and buyers submit offers, offers are 'matched', may be continuous or periodic)

# Clearinghouse Auction / Exchange Special Challenges

- **Trading Volumes** can be substantial  
e.g. shares, derivatives, forex
- **Volatile Prices**, which attracts 'day traders' and 'arbitrage dealers', which increases 'market depth', but also further increases volatility
- **Matching** needs to be performed fairly, e.g. priority based on price, then time of receipt
- **Price-Based Matching is not enough**  
because offers to buy and to sell whose prices match may not be for quantities that match

# E-Trading Conceptual Foundations

## Agenda

1. e-Trading, Markets, Marketspaces
2. Tradable Items
3. Trading Partner Relationships
4. Trading Partner Topologies
5. Processes
  - Deliberative Procurement
  - Spontaneous Purchasing
6. Auctions