

COMP 3410 – I.T. in Electronic Commerce

eTrading 1. Markets

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COMP 3410 The eTrading Segment

1. Markets
2. Technologies Underlying eTrading
3. Electronic Payments
4. eTrading in Digital Objects
5. Alternative Architectures
6. Carbon Trading

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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

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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

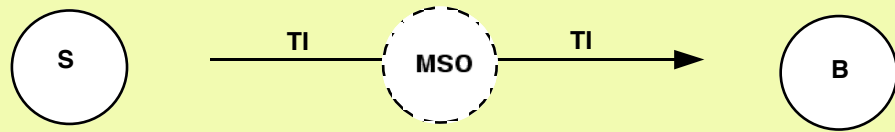
A virtual context in which entities
discover one another and **transact** business

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Market Participants



Seller S

Marketplace Operator MSO

Buyer B

Business Processes

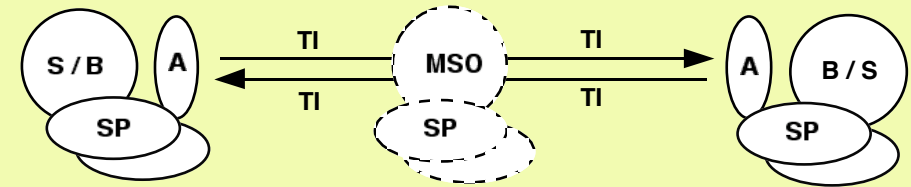
Infrastructure

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Market Participants



Sellers/ Buyers

Tradable Items

Buyers/ Sellers

Agents A

Marketplace Operator

Agents A

Service Providers SP

Business Processes

Infrastructure

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Market Phases

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

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Market Phases

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

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Categories of Tradable Items

- **Goods cf. Services** Deliver cf. Perform

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 - **Custom-Built** Architect-Designed, Tailor-Made
 - **Commoditised** Shares, Anthracite, Carbon Credits

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- **Physical cf. Digital** Atoms cf. Bits
- **Degree of Productisation**
 - **Custom-Built** Architect-Designed, Tailor-Made
 - **Customised** Installed Package Software
 - **Productised** Car Parts and Accessories
 - **Commoditised** Shares, Anthracite, Carbon Credits

Price-Setting Mechanisms

- **Price Pre-Set by the Seller:**
 - Shop Point-of-Sale
 - Catalogue-Sale

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 - 'Reverse Auction'

Price-Setting Mechanisms

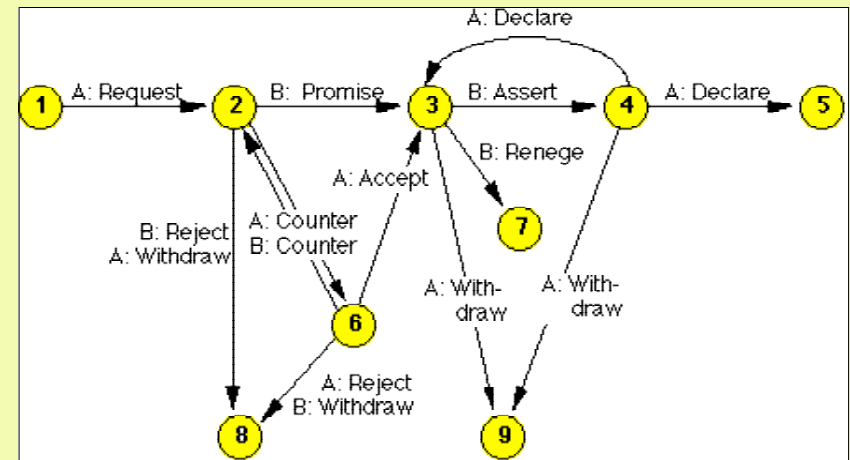
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- **Balanced Negotiation Process**

Negotiation

e.g. Speech Acts Theory



What Marketplace 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 Marketplaces

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

Categories of Buyer-Seller Relationships

- **B2C:** sale by a Business to a 'Consumer'
- **C2C:** sale by a 'Consumer' to a 'Consumer'

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

Business Enterprise Categories:

μ , SE, ME, LE, conglomerate, multinational

Categories of Buyer-Seller Relationships

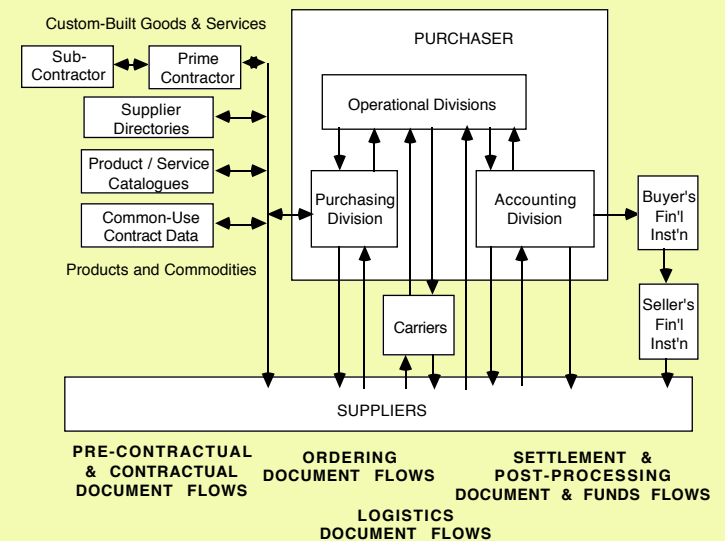
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- **B2G:** sale by a Business to a Government agency

Deliberative Procurement Process



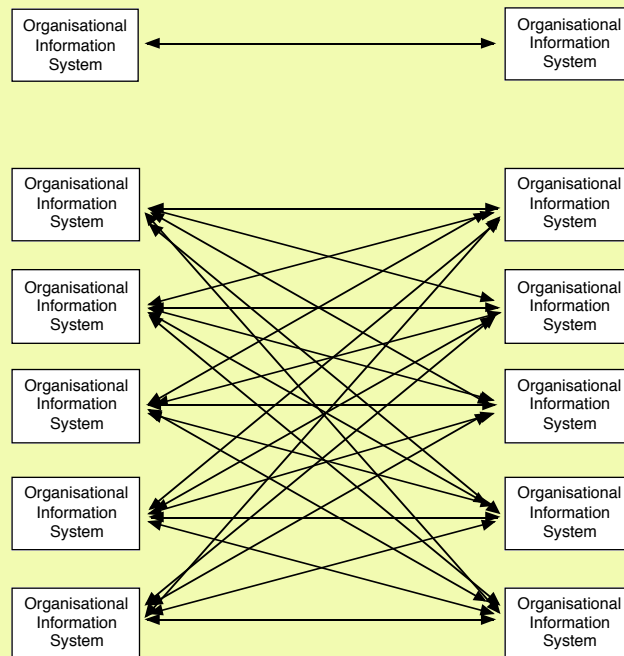
Spontaneous Procurement Process



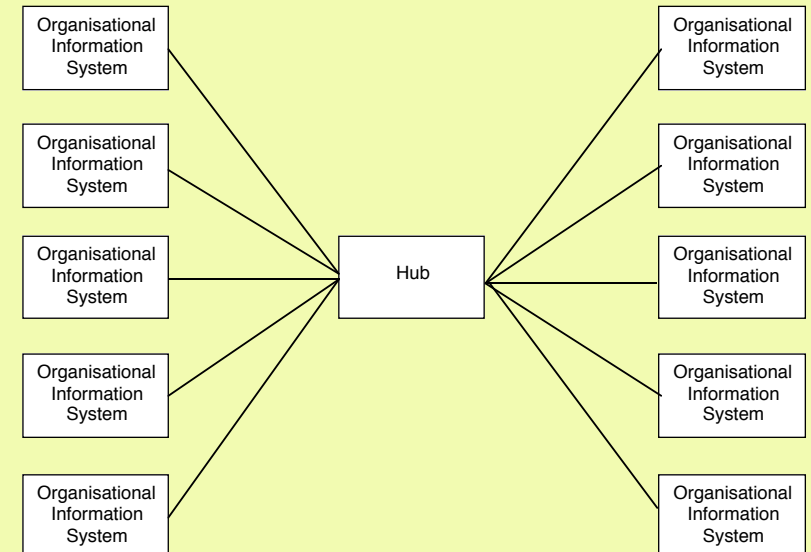
Categories of Buyer-Seller Topology

- **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))**

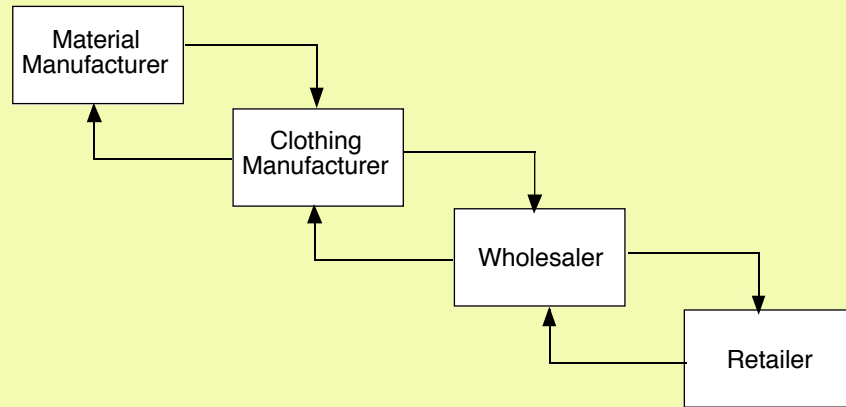
Inter- and Multi-Organisational Systems



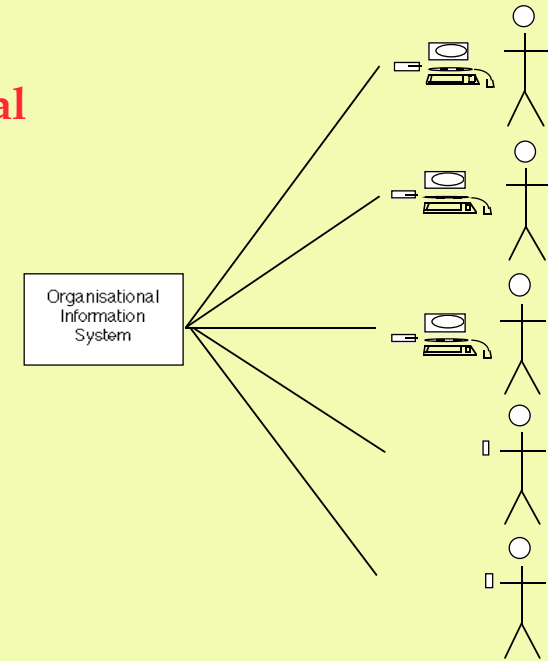
Hub and Spoke Systems



Cascading Systems



Extra-Organisational Systems



Categories of Commercial Arrangements What's Exchanged?

- Tradable Item Money **Sale**

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What's Exchanged?

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- Money Money **Cambio**
- Tradable Items Bulk Money **Subscriptions**
incl. pre-paid, period / site licence
- Money Promise of Money **Lending**

Categories of Commercial Arrangements

What's Exchanged?

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- Ads, Vanity Press, Exposure **Sponsorship**
Public Services? Freeware?

Direct Exchange Markets

- Exchange of Value 'horse-trading'
Direct
Immediate
Reciprocal

Direct Exchange Markets, Other Markets

- Exchange of Value 'horse-trading'
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Immediate
Reciprocal
- One-Sided Transfer, Without Compensation
donation, the 'gift economy'

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donation, the 'gift economy'
- Reciprocity, BUT Indirect and/or Deferred
'barn-raising', 'cooking pot', 'honey-pot'
'shareware', 'open source software'

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 attract '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 Markets Agenda

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

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