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Business Information Systems Unit 5 Electronic Commerce and Electronic Business

Dr. Martin Hepp

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What is E-Commerce?



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- **Any** form of business operations between **any** two parties using digital communication **over open networks**, especially the Internet.



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A Transaction Cost View on E-Commerce

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Transaction Costs:

- Costs caused by the exchange of resources
- **Search and information costs** are costs such as those incurred in determining that the required good is available on the market, who has the lowest price, etc.
- **Bargaining costs** are the costs required to come to an acceptable agreement with the other party to the transaction, drawing up an appropriate contract, etc..
- **Policing and enforcement costs** are the costs of making sure the other party sticks to the terms of the contract, and taking appropriate action (often through the legal system) if this turns out not to be the case.

Q: Wikipedia,
http://en.wikipedia.org/wiki/Transaction_cost


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Coase: The Theory of the Firm

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- Enterprises exist because for a part of the production process, internal coordination is less costly than the use of the market.
- The size of an enterprise is determined by the equilibrium between the the internal coordination costs vs. the costs of using the market mechanism.

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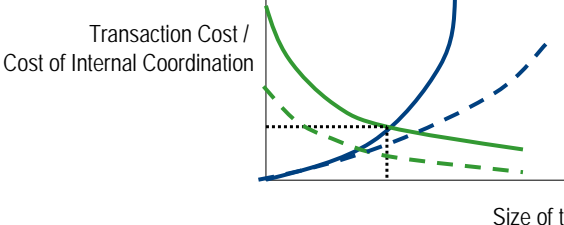

Malone: Electronic Markets and Electronic Hierarchies


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By reducing the costs of coordination, information technology will lead to an overall shift toward proportionately more use of markets—rather than hierarchies—to coordinate economic activity.


THOMAS W. MALONE, JOANNE YATES, and ROBERT I. BENJAMIN

- Electronic market mechanisms allow the use of markets for smaller transaction volumes, for more urgent needs,
- A general shift towards markets was predicted.
- Criticism: Only one side of the coin, since IT also reduces the cost of internal coordination.






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How does IT affect transaction costs?

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- Mechanized operations are
 - less costly per transaction
 - faster
- **feasible for a bigger part of potential market transactions**
- Examples
 - Google reduces search costs
 - SWS discovery reduces search costs
 - ontologies ease product description
 - online quotations for insurances
 - more information about partners
- **reduced search and information costs, bargaining costs, policing and enforcement costs**




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Which requirements must information meet in order to allow automated processing by machines?

? ? ? ? ?



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1. Structure

Quantity / Article # / Price
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- instead of

1 pcs Nr. 3456 (\$ 40 plus \$ 0.45)



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2. Unambiguous Semantics

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Price

Euro or Dollar?

including sales tax?

per piece or per packaging unit

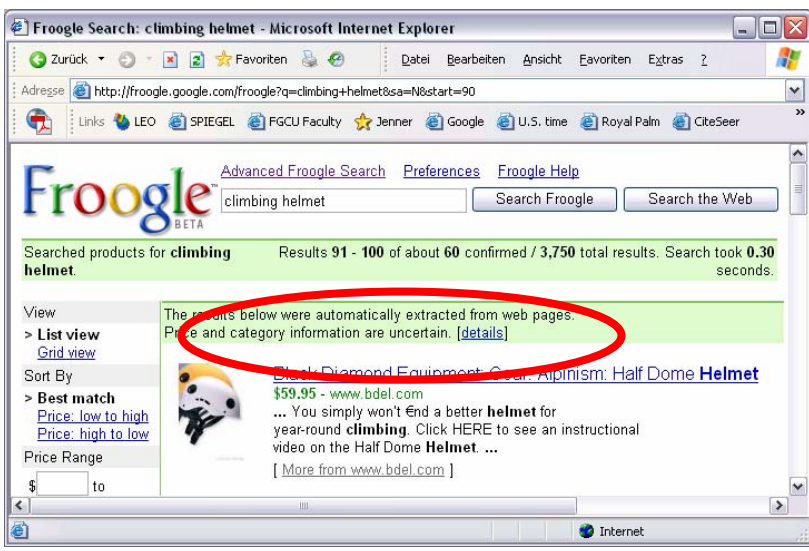
dito: Weight, Measurements, Key Financials




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Introduction to Electronic Commerce




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- Business-to-consumer (B2C) e-commerce
 - An average US family saves already 4500 \$ per year
- Business-to-business (B2B) e-commerce
- Consumer-to-consumer (C2C) e-commerce



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Why is E-Commerce so popular?





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- Reach
- Common Infrastructure
 - As soon as one is connected to the Internet, one can use **all** online services
- Speed and Asynchronous communication
- High degree of automation
- Ease-of-use, richness (e.g. images)




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Further Advantages



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- High degree of automation
- Ease-of-use
- Richness (e.g. images, sounds,...)
- Interactivity
- Personalization




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Example

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Example (2)

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Example (3)

Paper Media Integration


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 **Auto-ID Revisited** 

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WESBADEN





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06.01.2004 15:34


EINSTELLBEDINGUNGEN
SIEHE AUSHANG

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 **Auto-ID Revisited** 

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Auto-ID Revisited

Paper Media Integration

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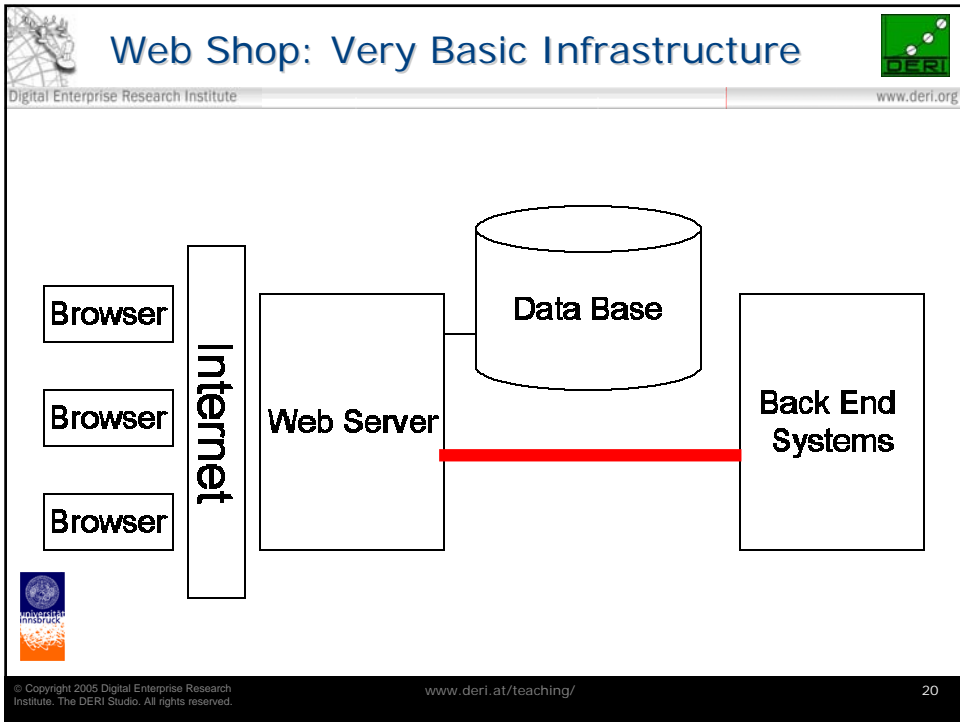
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...but: not limited to product information and ordering

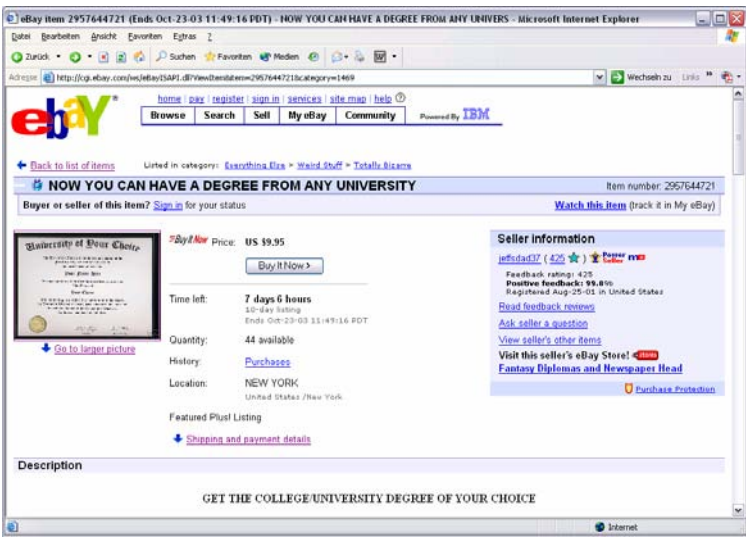


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Prominent Proof: eBay

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The screenshot shows an eBay listing for a degree from any university. The title is "NOW YOU CAN HAVE A DEGREE FROM ANY UNIVERSITY". The price is listed as US \$9.95. The listing includes a "Buy It Now" button, a "Time left" of 7 days 6 hours, and a quantity of 44 available. The seller information shows a feedback rating of 425 and a positive feedback percentage of 99.8%. The description at the bottom of the listing reads "GET THE COLLEGE/UNIVERSITY DEGREE OF YOUR CHOICE".



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Reduced Transaction Costs – Increased Market Volume

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eBay:

Active Users:
34.1 million

Gross Merchandise Sales (GMS):
\$5.6 billion in Q2-03

Walmart Inc.:
\$ 62.1 billion in Q2-03

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Do we have a choice?

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 **Reach** 

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 **Book Machine** 

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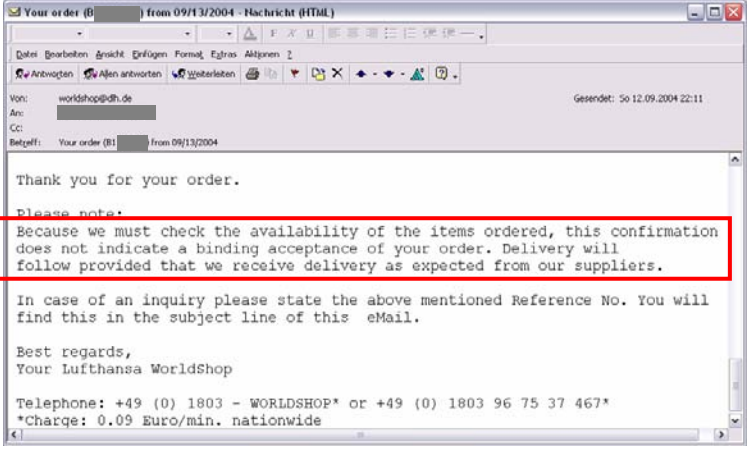




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Lack of Back-End Integration

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Global E-Commerce

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- Steps in localization
 - recognizing and conforming to the nuances, subtleties, and tastes of local cultures
 - supporting basic trade laws such as each country's currency, payment preferences, taxes, and tariffs
 - ensuring that technological capabilities match local connection speeds

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Global E-Commerce

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- Determine which global markets make the most sense for selling products or services on-line
- Decide whether Web content should be generated or updated centrally or locally

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Multi-dimensional Bidding

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Probabilistic Text Similarity

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HOME > **Computer** > **Drucker** > **Laserdrucker** > **Brother** ▾

Brother HL-1650
 Laserdrucker, DIN A4, 600dpi, parallel/USB, 16ppm, 16MB
 Hersteller: [Brother](#)




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Enter letters here exactly as they appear.

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Reasoning about Products and Services

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Thank you!

The slides will be available on the internet at
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