
WRITTEN EXAMINATION
FOR THE LECTURE
“E-COMMERCE”
WINTER SEMESTER 2004/2005
JULY 21, 2005
PROF. DR. RALF MÖLLER

Name: _____

Student Id: _____

Name of curriculum: _____

Signature: _____

Please note:

1. **Check if your student Id is on the list of Ids handed out by the supervisors.**
 - (a) If your **Id is not on this list**, please **fill out a proviso**, which will be given to you by the supervisor. **You may not start the exam until you have returned the proviso to the supervisor.**
 - (b) Also **fill out the additional form** given to you by the supervisor. Please **go to the students office** which is responsible for your curriculum and **let them sign the form. Return the signed form to the STS secretary (Harburger Schloßstr. 20, 2nd floor, Frau Hantschmann).**
2. Put your student identification card as well as your passport on the table.
3. You have **90 minutes** for answering the questions. **Additional resources are not allowed.**
4. The symbol “⊖” gives an advice on how much minutes to spend for answering a question.
5. There is sufficient space for your solutions on the examination sheets.
6. If you receive **additional pieces of paper** from the supervisor, please write your name and student Id also on these pages, and add a page number.
7. If you **need to leave the examination room**, silently **inform the supervisors. Do not leave your table.** Wait until the **supervisor approaches your desk and gives you the permission to leave the room.** There may be only one person away.

1. General questions about Internet technology – true or false?

Points per question: no answer = 0, correct = 1, incorrect = -1 point.

Question	True	False
Web pages are transported over the Internet using SMTP.	<input type="radio"/>	<input type="radio"/>
Certain IP addresses are reserved for certain Internet protocols.	<input type="radio"/>	<input type="radio"/>
Certain port numbers are reserved for certain Internet protocols.	<input type="radio"/>	<input type="radio"/>
Given a port number, the Domain Name Service finds out the URL for that port.	<input type="radio"/>	<input type="radio"/>
One MUST use URLs to access web pages with a web browser.	<input type="radio"/>	<input type="radio"/>
MIME types are used to securely transmit credit card payment information.	<input type="radio"/>	<input type="radio"/>
A class B network can have 256 hosts.	<input type="radio"/>	<input type="radio"/>
UDP is a <i>network layer</i> (OSI level 3) protocol.	<input type="radio"/>	<input type="radio"/>
IP is a <i>transport layer</i> (OSI level 4) protocol.	<input type="radio"/>	<input type="radio"/>
TCP connections are reliable (packages are never lost).	<input type="radio"/>	<input type="radio"/>
There are IP addresses which must not be registered for usage that everyone can use.	<input type="radio"/>	<input type="radio"/>
More than one URL can be used to address a resource on the Internet (e.g., web page).	<input type="radio"/>	<input type="radio"/>
HTTP is a connectionless protocol.	<input type="radio"/>	<input type="radio"/>
HTTP is a stateless protocol.	<input type="radio"/>	<input type="radio"/>



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2. Effects of the Internet on Commerce and Commercial Opportunities on the Internet:

(a) What is meant by the term *disintermediation*?

(b) Illustrate the disintermediation effect with a simple example, e.g., describe a Commerce scenario and briefly explain how disintermediation is achieved with ECommerce in this scenario.

(c) What is meant by the term *reintermediation*?

(d) Illustrate the reintermediation effect with a simple example, e.g., describe a Commerce scenario and briefly explain how disintermediation is achieved with ECommerce in this scenario.

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3. Briefly explain (in 3–4 sentences) the following terms and give an example illustrating the term:

(a) Broker

(b) Reverse Auction

(c) Frictionless Commerce

4. What is referred to as *dynamic pricing* and how can it be realized?

⊕
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⊕
1
P:
2

5. Business Models: Select two business models (BMs) according to Rappa's classification, describe each with a few sentences and give an example (e.g., an imaginary EBusiness) as well:

- (a)
- Name of BM:
 - Description of BM:

- Example for BM:

- (b)
- Name of BM:
 - Description of BM:

- Example for BM:



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6. Internet Technology and XML:

- (a) Describe the structure of an URL. Use an example URL for this.
- (b) HTTP is a request/response protocol. Name three HTTP *request* message types as well as one HTTP *response* message type.
- (c) Which HTTP message types can be used to transmit data to a server? Which HTTP message would you use to transmit large amounts of data to the server?
- (d) What are “sessions” and why are they needed?
- (e) You want to define the document structures of XML documents. Which options do you have? Name at least two options.
- (f) Which technique makes it possible to transform one XML document into another one (with probably different document structure)?

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7. Digital Encryption Techniques:

(a) What is referred to as public key cryptography? Why is this also called *asymmetric* cryptography?

(b) Public key cryptography can be used for document encryption as well as for digital certificates. Explain the fundamental difference in key usage in these use cases.

(c) Which general mathematical properties should an encryption function have in order to be useful for cryptography? Name at least 3 properties and explain why the property is needed!

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11. (c) ii. *Mercedes* is a special car manufacturer.

iii. An *Mercedes car* is defined as a special car whose manufacturer is Mercedes.

iv. A *car owner* is defined as a person who owns at least one car.

v. A *Mercedes car owner* is defined as a person who owns at least one Mercedes car.

vi. A *Mercedes car fan* is a car owner how only owns Mercedes cars.

(d) Does the concept *car owner* subsumes the concept *Mercedes car owner*? Explain why this is the case, or why this is not the case.

(e) Does the concept *Mercedes car owner* subsumes the concept *Mercedes car fan*? Explain why this is the case, or why this is not the case.

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Erreichbare Punkte: 108

In Minuten: 70