

Computer Mediated Communication Course Segment, 3p, Description

Last update: 11 January, 2002 by [Jacob Palme](#) E-mail: jpalme@dsv.su.se.

Course codes: SU: INT2, *:48.

An [abbreviated course segment description](#) is also available in Swedish.

[Schema](#) in the spring of 2002.

Changes Compared to Previous Year

In 2001, this course segment was changed as follows: The technical information about Electronic Mail was moved to the course segment [*:96 INTPROT](#). The book [Electronic Mail](#) is no longer be course reading. Instead, the book Computer-Mediated Communication, Linguistic, Social and Cross-Cultural Perspectives, edited by Susan Herring, is used as course reading, together with some [compendiums](#) with collected papers.

Responsible

[Professor Jacob Palme](#), phone +46-8-16 16 67, e-mail: jpalme@dsv.su.se.

Objectives

The objectives of this course segment are to give an understanding of software for Computer Mediated Communication between humans (CMC).

Prerequisites

Participants should have previous experience with the usage of electronic mail and have a basic understanding of computers and how they work and are used.

Syllabus

- Overview of CMC applications
- Social aspects of E-mail and CMC
- Research on CMC
- Ethical and legal aspects
- Theories, values and attitudes
- Cost/benefit aspects and CMC
- Choices in designing CMC systems

Language

The lectures will be in Swedish, but the exam and group task can be done in English and the main textbook will be in English. It is possible to take this course segment without knowledge of Swedish, since most of the course segment material is in English and since if you do not go to the lectures, you can read the book and written material instead. If you want the exam in English, you should notify Jacob Palme well in advance of the date of the exam.

Approximate Lecture Schedule

See the schema for a particular term for more exact information about what will be said when. Topic information may not exactly follow the schema.

| Lecture | Topic |
|---------|---|
| 1 | Introduction |
| 2 | Application overview |
| 3 | Research on CMC |
| 4-5 | Effects, cost-benefit |
| 6 | Values and ideologies |
| 7-8 | Speech act theory and software based on speech act theory |
| 11 | Law and ethics |
| 9-10 | A personal history of CMC |
| 14-15 | Spare time |
| 12-13 | Chats, muds and moos |

Course segment reading

Main course book:

Herring, Susan C. (ed): Computer-Mediated Communication Linguistic, Social and Cross-Cultural Perspectives, John Benjamins Publishing, 1996.

Papers copied to course segment participants:

These papers will be sold by [Studerandeexpeditionen](#) at DSV.

Electronic Mail and Computer Conferencing Course Segment, 3p, Segment Description (=the document you are reading now).

[Work task specification.](#)

Copies of some chapters from [Jacob Palme: Electronic Mail. Artech Books 1995.](#)

Palme, Jacob: Copies of overhead pictures about Computer-Supported Cooperative Work (partly in Swedish).

Alan Dix et al: Groupware: In Human-Computer Interaction Prentice Hall, 1993, ISBN 0-13-437-211-5, pp 423-468.

Alan Dix et al: CSCW Issues and Theory: In Human-Computer Interaction Prentice Hall, 1993, ISBN 0-13-437-211-5, pp. 469-514.

Sara Kiesler et al: Social Psychological Aspects of Computer-Mediated Communication, in American Psychologist (1984) 39 (10) pp. 1123-1134.

[Wanda J. Orlikowski: Evolving with Notes: Organizational Change around Groupware Technology. Internet.](#)

Charles Dunlop and Rob Kling: Social Relationships in Electronic Communities, from Computerization and Controversy: Value Conflicts and Social Choices, Academic Press 1991, ISBN 0-12-224356-0.

[Donald Broady: Kulturens fält: Om Pierre Bourdieus sociologi. 1998.](#)

[Jacob Palme: Some chapters from the book "Electronic Mail".](#)

[Jacob Palme: Can computer decide what is right and wrong?](#)

Work task

Work task for this course available in [English](#) or [Swedish](#). The work task should be done in groups of 2-3 students, but students with special reasons (such as work) may supply the work task individually. Preface form to be used when submitting the task is available in [HTML](#) and [RTF](#) format.

There will be no teacher supervision during the times reserved in the terminal room during the course. These times are only meant for writing the report from the work task.

Sample exams with solutions

Warning: The course content has changed in 1997 and again in 2001. In 1997, more technical material was added, and the length of the course was extended from 3 to 4 weeks. In 2001, the technical material added in 1997 was removed, the extent was again reduced to 3 weeks, and the course book was changed. This means that old exams may contain questions on issues not included in the course. In particular, the last two exam questions in 1997-2000 covered technical issues not included in the course any longer in 2001.

- [September 1993.](#)
- [January 1996.](#)
- [October 1996.](#)
- [October 1997.](#)
- [December 1997.](#)
- [December 1998.](#)
- [March 1999.](#)
- [December 1999.](#)
- [February 2000.](#)
- [April 2000.](#)
- [May 2001.](#)

Note that the segment contents will change again in 2001. This means that some of the questions in old exams (usually question no. 3 and 4 in the exams) apply to areas not covered by the course in 2001.

Examination

All students must [register in advance](#) for the exam.

- One written examination (3,5 points in 1997) plus
- One [written task](#) (0,5 points).

No documents except ordinary language dictionaries can be brought to the exam.

What is important for the exam

There can be questions on the exam on anything in the course material. Do not forget the additional papers, there are often questions on them in the exam, questions which are not covered only by the book.

I try to make questions on important principles, not on detailed issues or names. However, I may regard things as important, which you might regard as a detail.

The detailed technical questions in exams before 2001 will not occur in 2001, since the course content has been changed so that this is not any more included in the course.

If you do not go to the lectures: Read carefully the copies of overhead slides provided for some of the lectures. They contain information which may not be anywhere else in the documentation.



Mailing List or First Class Conference

Important information about this segment will be distributed through an e-mail mailing list and a First Class conference. The same information will be sent to both the mailing list and the First Class conference, so students can choose to subscribe to either.

All course participants should either register for this list or regularly access the First Class conference.

To register for the mailing list, send a message to: listserv@su.se which contains the text:

SUB EPOST Nils Nilsson

where "Nils Nilsson" is replaced by your name (not your e-mail address).

Important: This text should be in the text of the message, *not* in the Subject!

You should get a confirmation message from LISTSERV saying that you have been added to the list.

At the end of the course, you can unsubscribe from the mailing list, by sending a message to listserv@su.se which contains the text:

UNS EPOST

After doing this, you can send questions about the course by e-mail to epost@su.se. The question and my answer will be published both through the mailing list and in First Class, even if you send the question only to the mailing list.

If you prefer to get the information through First Class, get an account at the DSV [First Class](#) server, and move the INTPRO meeting, and its submeetings (INTPRO Dokumentation, INTPRO Handledning and INTPRO Fritt forum), to your First Class desktop. However, if you prefer to use First Class, you should still send your questions to the teacher by e-mail to epost@su.se and not write them in the first class conference. Your questions, and the teachers's answers, will still appear in the First Class conference.



Get a working e-mail address

In order to take part in this course, you have to have a working e-mail address, where you read your mail regularly. Note that DSV can give you an e-mail address on our computers, if you do not have any. You can also get free e-mail accounts with a number of Internet providers.

If you have an e-mail account outside from DSV, but also have a Unix account at DSV (such an account automatically includes an e-mail account), and if you read your e-mail more regularly on the account outside of DSV, then you should arrange for forwarding of e-mail from the DSV account to the external mail account. [There is a simple description on how to do this.](#)

E-mail at DSV

Students at DSV can get their own e-mail accounts. [Here is more information about the e-mail services provided by DSV \(in Swedish\).](#)

URL of this web page:
<http://dsv.su.se/jpalme/cmc-course/MHS-course-eng.html>

Work task on the course segment: Electronic Mail and Computer Mediated Communication

[This task description is also available in Swedish.](#)

The object of the task is that students in group sizes 2-3 persons shall discuss a question and then write a written report of 1-2 pages of the results of this discussion.

The question to be discussed is:

The company XXX is to decide on its future e-mail-strategy. Which are the requirements on e-mail for this company? Which functions and facilities are needed? Try to produce a list of the most important items which the company should think of when choosing the e-mail strategy.

Important: The task does *not* involve a choice between X.400 and Internet e-mail. And it is important that you discuss the needs from a user perspective, not *only* from a pure technical perspective.

Variation: Each group should first specify the company XXX as a basis of its discussion. How many employees, what kind of existing computer usage, what is the company producing. Select a company (real or fictitious) and use the needs of this company as a basis for your discussions.

The work task should be submitted in the box for work task submission at DSV, not later than the first monday after the day of the exam. You can only submit it by ordinary postal mail, but **not** by e-mail. A preface to the worktask can be found on the web in [HTML-format](#) and in [RTF-format](#).

The booking of computer rooms which has been done for this course is only to ensure access to computers to write your work task. There is no supervised laboratory task in this course.



| No. | Question in English | Question in Swedish | Max points |
|-----|--|---|------------|
| 1 | Specify some different ways, in which a company can earn money by selling services and/or products in the e-mail area. | Nämn några olika sätt på vilka ett företag kan tjäna pengar på att sälja tjänster och/eller produkter inom elektronisk-post-branschen. | 6 |
| | <p>Answer:</p> <ul style="list-style-type: none"> 2 Servicebyrå 2 Sälja programvara och maskinvara 2 Sälja växeljänster och nät 2 Katalogsystemtjänster 1 Utbildning, consulting 1 Missuppfattat frågan till hur företag kan rationalisera sin verksamhet med elektronisk post före ändrad formulering av frågan. 2 Missuppfattat: Sälja tjänster via epost. | | |
| 2 | Traditionally, human language has been described by saying that the words refer to objects in the real world, such as cats, factories, rays, etc. Which alternate descriptions of the function of language have had a large influence in the understanding of computer systems for communication between humans? | Traditionellt har mänskligt språk beskrivits som att orden beskriver, refererar till, saker som finns i verkligheten, typ katter, fabriker, strålning, etc. Vilka alternativa beskrivningar finns av språkets funktion, som har haft betydelse för att förstå datorsystem för samarbete mellan människor? | 6 |
| | <p>Answer:</p> <p>The alternate description is based on the idea that speech is action (2). Speech is thus described as speech acts (4) (Swedish: talhandlingar), such as request, offer, promise, question (2), etc. Some very wellknown and somewhat controversial systems have been based on this model.</p> | | |

| | | | |
|---|---|---|---|
| 3 | Describe some tasks for a person who is the administrator of an e-mail mailing list. Some of these tasks can be made easier by the software systems for mailing list handling. | Beskriv några uppgifter för en person som är administratör för en e-post-distributions-lista. Vissa av dessa uppgifter kan förenklas genom funktioner i programvara för hantering av sådana listor. | 6 |
| | Answer: 3 Handle subscriptions 1 Handle non-deliveries 2 Approve contributions 1 Set list parameters | | |
| 4 | How is it possible, using functions specified in e-mail standards, to specify the previous e-mail message, to which a new message is a reply. | Hur kan man (med användning av funktioner definierade i standarder för e-post) ange vilket tidigare brev, som ett nytt brev är svar på. | 6 |
| | Answer: Every message can have a globally unique identification code (2), called "Message-ID" (1). Responses to a message can contain the Message-ID of the replied-to message (2) in "References" (1) or "In-Reply-To"(1) headers. | | |



Institutionen för Data-
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***:48 and INT2 Electronic
Mail and Computer
Mediated Communication**



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**Exam 2000-04-15
with solutions**

You can submit the exam in Swedish or English, but if you want the text of the exam questions in English, you should notify Jacob Palme at least two weeks in advance. Examen på svenska på andra sidan.

***Please write your e-mail address on the outside of
the folder with your exam. Print very legibly.***

Allowed documents during the exam: Ordinary language dictionaries to and from Sweden and English.

To pass this exam, you will have to have a certain minimum number of points separately on question 1-2 and on question 3-4.

Carefully read the questions and check that your answer is really an answer to the question. As an example, in one exam a question was "Describe important characteristics with non-simultaneous computer conferencing systems, and which makes them different from electronic mail systems". One student gave a thorough description of the differences between computer conferencing and face-to-face meetings. Such an answer will regrettably give no points at all!

| No. | Question | Max. score |
|------------|--|-----------------------|
| 1 | What is meant by work flow applications, and discuss problems with success in implementing such systems. | 6 |

Solution: Software for the handling of a set of related work tasks by several people in a specified order and with special roles and rights for different people. Involves standardized messages between them, sometimes based on so called speech acts , like "request", "promise-to-do", etc.

Problems are that the software may not be flexible enough, real work tasks may involve exceptions and special cases not covered by the software. There is a risk that people feel too controlled by the computer, and that their opportunities to find new ways of improving their handling of work tasks is prevented by the software. When the developers tries to handle more exceptions and special cases, then the software instead becomes too complex, and difficult to working well.

- 2 Some studies show that it is more difficult to agree on 6
a decision in computer-mediated groups, as compared
to face-to-face communication. Why?

Solution: Lack of voice inflection and body language makes it more difficult to get across feelings. Non-simultaneous groupware makes it more difficult to find suitable solutions by suggesting and checking alternatives. Discussions tend to continue too long, with the same argument repeated multiple times, because the software often only allows you to keep your view remembered is to repeat it. CMC gives more equal opportunity for everyone to state their view, but this may then cause less dominance for a few people and make it more difficult to arrive at a decision. At a F2F meeting, once you have got to the meeting, you have to participate, and you have to make a decision this day or wait until the next meeting.

- 3 In which ways can the sender of an e-mail message 6
check if the message has arrived and been read,
using methods specified in e-mail standards?

Solution: The sender can request delivery and receipt notifications. Delivery notifications indicate if the messages has been stored in the recipient's mailbox. Receipt notifications indicate if the recipient has viewed or printed or otherwise disposed with the message.

Requests for delivery notifications can specify that you want notificatins at delivery, or when delivery was not possible, or when delivery was delayed.

The message is identified, in these notifications, by its Message-ID.

- #### 4 How does a digital signature work? 6

Solution: There are several different methods, but the most common method works as follows: The sender computes a checksum of the message, and encrypts this checksum with his secret key. Recipient decrypts the encrypted checksum with the open key for the sender, and checks if it agrees with the current message content. Requires method of distributing open keys without risk of their falsification, which can be done by certificate authorities.



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***:48 and INT2 Electronic Mail
and Computer Mediated
Communication**



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Exam 2000-02-26

You can submit the exam in Swedish or English, but if you want the text of the exam questions in English, you should notify Jacob Palme at least two weeks in advance. Examen på svenska på andra sidan.

***Please write your e-mail address on the outside of
the folder with your exam. Print very legibly.***

Allowed documents during the exam: Ordinary language dictionaries to and from Sweden and English.

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Jacob Palme can be reached by phone during the exam
on phone 08-664 77 48 between 11-13 o'clock.

| No. | Question | Max. score |
|-----|--|------------|
| 1 | What is meant by "breakdown analysis", as a method of judging the quality of groupware? Discuss the merits and dismerits of this method. | 6 |
| | <p>Reply:</p> <p>Breakdown analysis is a method, where you analyze when people using groupware begin discussing or having problems with the groupware itself, instead of with the task they are to use the groupware for.</p> <p>Advantages: Simple measurable, can give good insight into problems with groupware.</p> <p>Disadvantages: Will only illustrate some aspects of the groupware. Results depend very much on user's computer experience and experience with the groupware itself. "Breakdowns" are not always a bad thing, the groupware is part of the culture and there is a reasonable need to be able to discuss the cultural environment.</p> | |
| 2 | How does Computer Mediated Communicatin (CMC) change the communication patterns in an organisation, and are these changes beneficial or not? | 6 |

Reply:

More contacts at larger organizational distances.
More time spent on communication. Communication in larger groups becomes more efficient. People can communicate independent of the hierarchical structure of an organization. Young people and people who are not bosses are aided, so that equality in an organization increases.

Benefits: People learn from each other, can solve problems faster, less risk of getting stuck in inoptimal behaviour, faster adjustments to a changing world.

Cons: Can take too much time (certain topics tend to cause lots of flaming and never be resolved), create information overload, cause people to optimize their own needs rather than that of the organisation.

-
- | | | |
|---|---|---|
| 3 | Does e-mail contain a trace list of the stages of transmission of a message? If yes, how does it work, and what can it be used for? | 6 |
|---|---|---|

Reply:

Yes, as a list of "Received:" header fields at the top of the RFC822 message heading. Each passing of the message from one MTA to another causes an entry to be added. Useful for finding out the cause of problems with e-mail. Can also be used for loop control purposes.

-
- | | | |
|---|---|---|
| 4 | The original SMTP protocol includes a number of small steps of interaction between two transmission agents. ESMTP has a method for reducing the disadvantage caused by these steps. Describe this method and discuss its pros and cons. | 6 |
|---|---|---|

Reply:

The facility is called "pipelining". If both MTAs agree, the sending MTA can send new SMTP commands without waiting for the responses on previous SMTP commands.

Pros: Can make SMTP transmissions much faster.

Cons: Backtracking difficulty if an error occurs.
Since, however, most message transmissions do not cause any error, the Pros outweigh the cons.



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***:48 and INT2 Electronic Mail
and Computer Mediated
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Exam 2000-01-15

You can submit the exam in Swedish or English, but if you want the text of the exam questions in English, you should notify Jacob Palme at least two weeks in advance. Examen på svenska på andra sidan.

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Jacob Palme can be reached by phone during the exam on phone 08-664 77 48 between 11-13 o'clock.

| No. | Question | Max. score |
|-----|---|------------|
| 1 | <p>What is meant by "Cultural Capital" according to the theories of Pierre Bordeaux?</p> <p>Answer: A person has a capital in his knowledge of how to communicate and behave, and his status among his peers (4) = "Cultural Capital". This status is upheld by gifts and counter-gifts which are not just paying and charging money (2). All of this is included in the combined term "Symbolic Capital".</p> | 6 |

- 2 What causes people, who communicate, to understand each other, and how can this understanding have problems when they are communicating using groupware systems.

6

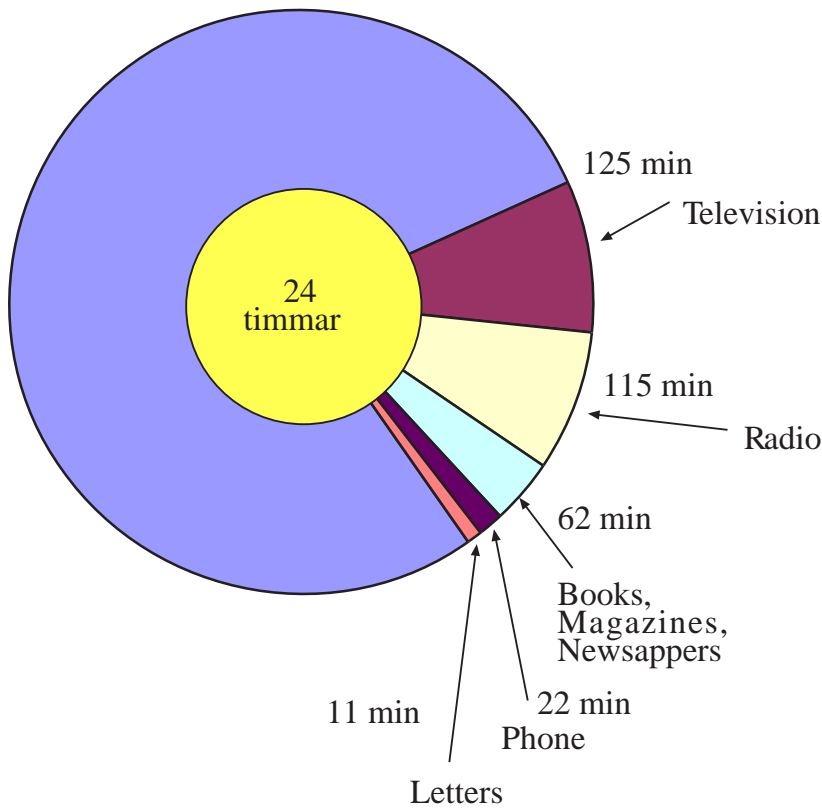
Answer: Important for understanding each other is body language, voice inflection, which is not available in textual CMC systems (3). Important also is that with rapid interaction in same-time communication, people can clarify if they understand each other better than in different-time communication (3). People using different-time textual media can to some extent circumvent these problems by inventing new modes of communication and new algorithms for solving problems, which are suitable to the different-time medium (2). Example: Smileys, listing several alternatives in a query, instead of only one at a time.

4 What can be done to counteract spamming? Why do methods to counteract spamming often not work? Give examples. 6

- 1) Filtering on special properties of spams, such as incorrect sender (1) or that the recipient is only named on the envelope, not in the content (1).
- 2) Forcing ISPs who allow spammers to cancel their accounts by threats of disconnection from the Internet (1).
- 3) People help each other by exchanging data about spams, such as deletions (1).
- 4) Pre-moderated mailing lists (1).
- 5) Cancelbots (1).
- 6) Lawmaking (1).

The problem is that the spammers will, whenever many people begin using a method of counteracting spam, invent some ways of circumventing it (2).

Sverige 1985



USA 2002

