

MANCHESTER

DL

The University of Manchester

CT334/434 CSCW

Week 12: Revision

Oscar de Bruijn and Antonella De Angeli

MSS/D8

o.debruijn@co.umist.ac.uk

Ext: 5829


MANCHESTER

DL

The University of Manchester

Today's Lecture

- Roundup of past lectures
- Reiteration of important issues
- Break
- Results from AccessGrid Evaluation
- Exam
- Questions
- PG: group-work feedback and final considerations



2004/05
CT334/434 CSCW: Intro and Group Work
2

MANCHESTER

DL

The University of Manchester

Overview of Lectures

- Week 1: CSCW and group work
- Week 2: Groupware
- Week 3: Issues in the design of groupware
- Week 4: Evaluation of groupware
- Week 5:
 - UG: Global software development
 - PG: On-line communities
- Week 9: AccessGrid field trip
- Week 10:
 - UG: On-line communities
 - PG: On-line communities for DL students; Global software development
- Week 11: Mobility
- Week 12: Revision

2004/05
CT334/434 CSCW: Intro and Group Work
3

The University of Manchester
MANCHESTER

The Context

2004/05
CT334/434 CSCW: Intro and Group Work
4

The University of Manchester
MANCHESTER

What should groupware do?

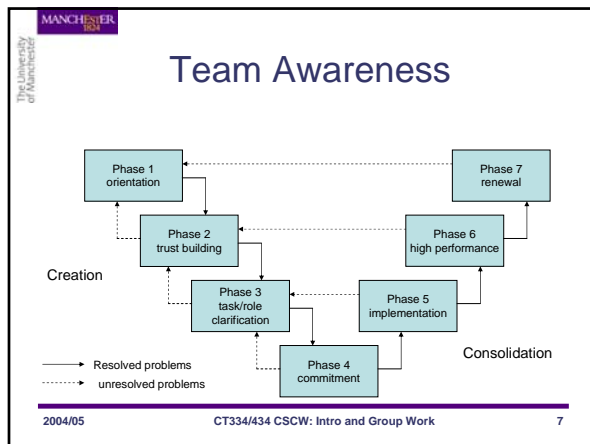
- Provide communication between group members
- Coordinate and control shared objects
- Provide organisation and common understanding of the work process
- Support decision making and problem solving

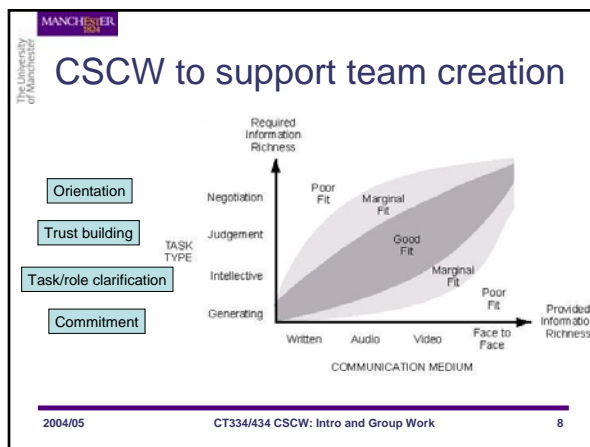
2004/05
CT334/434 CSCW: Intro and Group Work
5

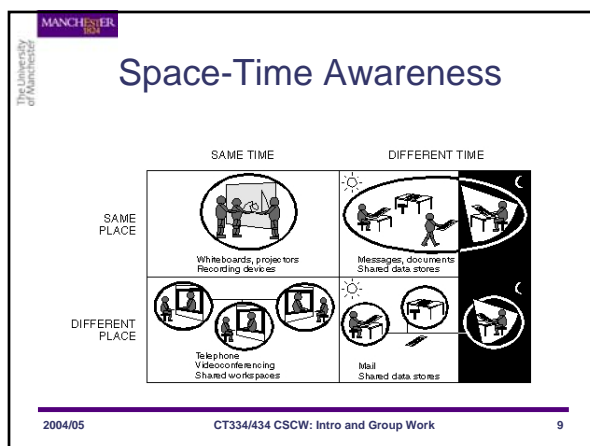
The University of Manchester
MANCHESTER

CSCW

2004/05
CT334/434 CSCW: Intro and Group Work
6







The University of Manchester
MANCHESTER

Synchronous Awareness:

- What You See Is What I See: WYSIWIS
 - Consistent presentation of shared information
 - Strict form
 - Relaxed forms
- Workspace awareness

2004/05
CT334/434 CSCW: Intro and Group Work
10

The University of Manchester
MANCHESTER

Cool room example

- Strict WYSIWIS example
- Workspace awareness:
 - who is doing what?
 - Are objects shared?
- Concurrency controller
- movie

2004/05
CT334/434 CSCW: Intro and Group Work
11

The University of Manchester
MANCHESTER

Asynchronous Awareness:

- What are the other members of the group doing that might have consequences for my own activities?
 - Informal awareness
 - Group-structural awareness
 - Social awareness
 - Workspace awareness

2004/05
CT334/434 CSCW: Intro and Group Work
12

The University of Manchester
MANCHESTER

Peripheral Awareness

- Maintain awareness without conscious effort
 - Peripheral
 - Portholes
 - Coffee table
 - Ambient
 - Activities in an office
 - Dangling strings

2004/05
CT334/434 CSCW: Intro and Group Work
13

The University of Manchester
MANCHESTER

Communityware

- Aims:
 - Creating community space
 - Support access to and contribution of community information
 - Knowing each other
 - Who's who
 - Knowing the rules
 - What behaviour is acceptable?
 - Sharing preference and knowledge
 - History Rich Media
 - Recommending
 - Generating Consensus
 - Voting and Polls

2004/05
CT334/434 CSCW: Intro and Group Work
14

The University of Manchester
MANCHESTER

Conflict awareness

- Social Loafing
 - tendency of individual group members to reduce their work effort as groups increase in size
- Diffusion of responsibility
 - The belief that the presence of others makes one less responsible for the events that occur in that situation
- De-individuation
 - Loss of a sense of individuality and a consequent weakening of social norms and constraints
- Group-polarisation
 - The group tend to enhance shared pre-existing views (more extreme attitudes, opinion)

2004/05
CT334/434 CSCW: Intro and Group Work
15


MANCHESTER

IBM

The University of Manchester

Mobile awareness

- Extend the benefits of awareness information to mobile users
 - E.g., Mobile IM (IBM Sametime Everyplace)
- Provide information about unpredictable factors
 - Presence: Which device should a person be contacted on?
 - E.g., desktop; mobile phone; public terminal
 - Context: Which mode of communication will be most effective and suitable for the circumstances?
 - E.g., voice or text
 - Location: Is the person in a location in which this message makes sense?



2004/05

CT334/434 CSCW: Intro and Group Work

16


MANCHESTER

IBM

The University of Manchester

Cultural Awareness

- Customs
 - Procedures
- Values
 - High versus low context
 - Trust
- Beliefs
 - Often implicit



2004/05

CT334/434 CSCW: Intro and Group Work

17


MANCHESTER

IBM

The University of Manchester

The Problem of Critical Mass

- No groupware technology will work unless a high percentage of team members use it
 - Availability of groupware technology?
 - Access to groupware technology?
 - Ability to use groupware technology?
- As a central coordination tool, ALL team members must be able to satisfy these conditions
- Solution: Minimize requirements



2004/05


CT334/434 CSCW: Intro and Group Work

18

The University of Manchester
MANCHESTER
BSA

Personal Motivation

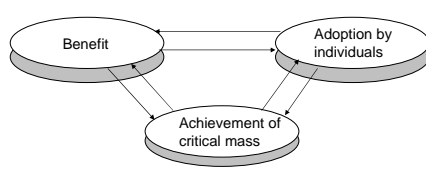
- Individual effort versus team benefit
 - There is always an individual cost to using groupware technology
 - Benefit lag
 - Effort to use and effort to maintain
 - Prisoner's dilemma problem
 - Nobody wants to be the first, but somebody has to pioneer the use of the technology
 - Problem of lurking in on-line community
 - Social loafing
- Solution: Design for the individual



2004/05
CT334/434 CSCW: Intro and Group Work
19

The University of Manchester
MANCHESTER
BSA

The 'Vicious circle'



```

graph TD
    Benefit((Benefit)) --> Adoption((Adoption by individuals))
    Adoption --> CriticalMass((Achievement of critical mass))
    CriticalMass --> Benefit

```

2004/05
CT334/434 CSCW: Intro and Group Work
20

The University of Manchester
MANCHESTER
BSA

Social, Political and Organisational Issues

- Disruption of the social dynamics of groups
 - Violating social taboos
 - Challenging organisational politics
- Lack of support for exception handling and improvisation
 - There is a difference between the way things are supposed to work and how they actually work
 - Standard procedures may not be productive
- Solution: Minimise constraints



2004/05
CT334/434 CSCW: Intro and Group Work
21

The University of Manchester
MANCHESTER

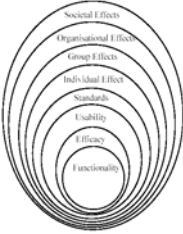
Technical Issues

- Lack of integration with existing applications
 - People do not like to give up their favourite applications
 - Nor do they like to change their work habits
- Solution: Maximise external integration

2004/05
CT334/434 CSCW: Intro and Group Work
22

The University of Manchester
MANCHESTER

Evaluation criteria



1. Does it work? (*functionality*)
2. Does it work well enough? (*efficacy*)
3. Is it workable with? (*usability*)
4. Does it follow the *standards* laid down by various bodies? (*standards*)
5. What does it do to those who work with it? (*individual effect*)
6. What does it do to their work? (*group effects*)
7. What does it do to those they work with and for? (*organisational effects*)
8. What does it do to the world beyond work? (*societal effects*)

2004/05
CT334/434 CSCW: Intro and Group Work
23

The University of Manchester
MANCHESTER

When to evaluate?

- Concept evaluation
 - Analyse potential impact of new socio-technical system on the basis of scenarios
 - Before implementation -> requirements (four principles of groupware design)
 - Maximise Personal Acceptance; Minimise Requirements; Minimise Constraints; Increase external integration
- Prototype evaluation
 - Test if the applications function as they were planned and whether user-interfaces are usable
 - During implementation -> grounded design decisions
- Operational evaluation
 - Evaluate impact of technology on work setting: communication, social interaction, quality of work and organisational efficiency
 - After implementation -> adoption knowledge & requirements for new technology

2004/05
CT334/434 CSCW: Intro and Group Work
24

MANCHESTER

BSA

The University of Manchester

How to evaluate?

- Inspection methods:** evaluators 'inspect' an interface according to a set of criteria
 - Heuristics (HCI)
- User observations:** evaluators observe users performing tasks within a semi-controlled setting
 - User testing (HCI)
 - Laboratory experiments (cognitive/social psychology)
- Verbal methods:** evaluators ask users their opinion
 - Interviews, Questionnaires, Focus Groups and Customer Feedback (social psychology & marketing)
- Field studies:** evaluators study people interacting within their world
 - Ethnography (HCI)
 - Conversation Analysis and Interaction Analysis (Ethnomethodology)
 - Breakdown Analysis (Breakdown Analysis)

2004/05

CT334/434 CSCW: Intro and Group Work

25

MANCHESTER

BSA

The University of Manchester

AccessGrid evaluation

Category	Mean
Learning	~3.6
Interaction	~2.5

2004/05

CT334/434 CSCW: Intro and Group Work

26

MANCHESTER

BSA

The University of Manchester

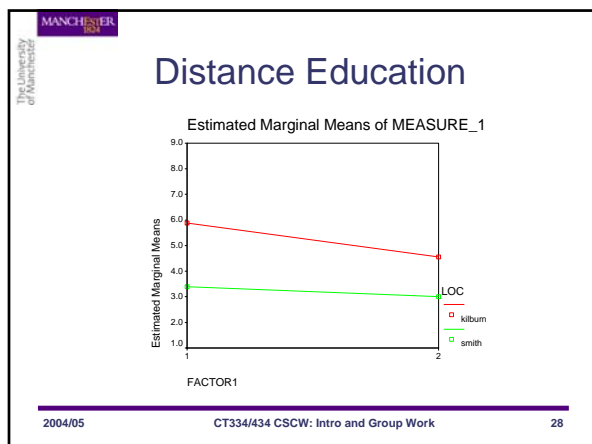
Audio/Video communication

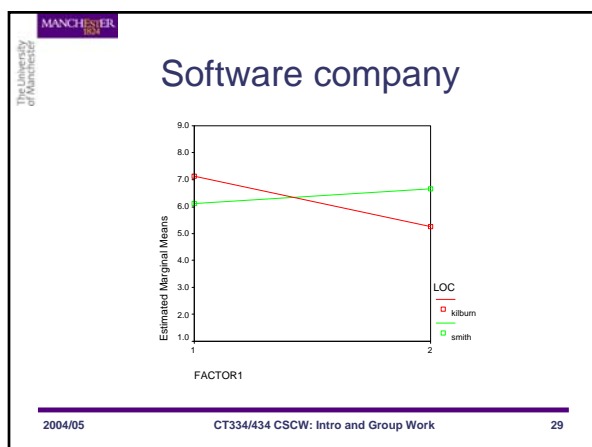
Factor	Mean
expectation	~4.2
facility	~3.6
lecturer's face	~3.8
audio quality	~3.6
video quality	~4.2
no failures	~4.2
A/V synchronisation	~4.0
reliability	~3.9

2004/05

CT334/434 CSCW: Intro and Group Work

27





- MANCHESTER
UNIVERSITY
- The University of Manchester
- ## Exam
- Answer 3 Questions out of 5
 - Each question has three parts
 - A) tests factual knowledge
 - B) tests factual knowledge and insight
 - C) tests insight and application
 - 70% of final mark
- 2004/05 CT334/434 CSCW: Intro and Group Work 30

The University of Manchester
MANCHESTER

Example

a) Name three reasons for why working as part of a group may be more effective than working alone.

- Combining areas of expertise
- Combining multiple points of view
- Split large tasks
- Members can adopt different roles

2004/05
CT334/434 CSCW: Intro and Group Work
31

The University of Manchester
MANCHESTER

Example

b) Give two common causes of conflict arising within a team. Explain why these may be particularly affecting distributed teams.

• Differences in beliefs, values and interests	• Dispersion
• Scarcity of resources	• Coordination breakdown
• Rivalries between groups	• Loss of communication richness
• Pressures to avoid failure	• Loss of Teamness

2004/05
CT334/434 CSCW: Intro and Group Work
32

The University of Manchester
MANCHESTER

Example

c) You are designing a CSCW system to support a globally distributed software team. How would you design the system such that the risk of conflicts is minimised?

2004/05
CT334/434 CSCW: Intro and Group Work
33
