

Supporting Creativity in Group Sessions

Hauptseminar “E-Learning” – Sommersemester 2008

Annika Frank

LFE Medieninformatik

22. 06. 2008

Creativity

- ≡ The term emerged around 1950
- ≡ The product of creative work is a novelty
- ≡ Two forms of creativity (Boden, 2003):
 - ≡ Psychological creativity (P-creativity): the idea is new to the person who had it
 - ≡ Historical creativity (H-creativity): nobody in human history had this idea before

Creativity support techniques

- ≡ Visualization

- ≡ What-if-tools

- ≡ Thinking by free associations

 - ≡ Brainstorming

 - ≡ “Brainwriting”

 - ≡ Electronic Brainstorming System (EBS)

 - ≡ Mind Maps

- ≡ Discussions with colleagues and counselors

Collaborative Work

≡ Why do people work together?

- ≡ In order to achieve a mutual goal

≡ Definition of team:

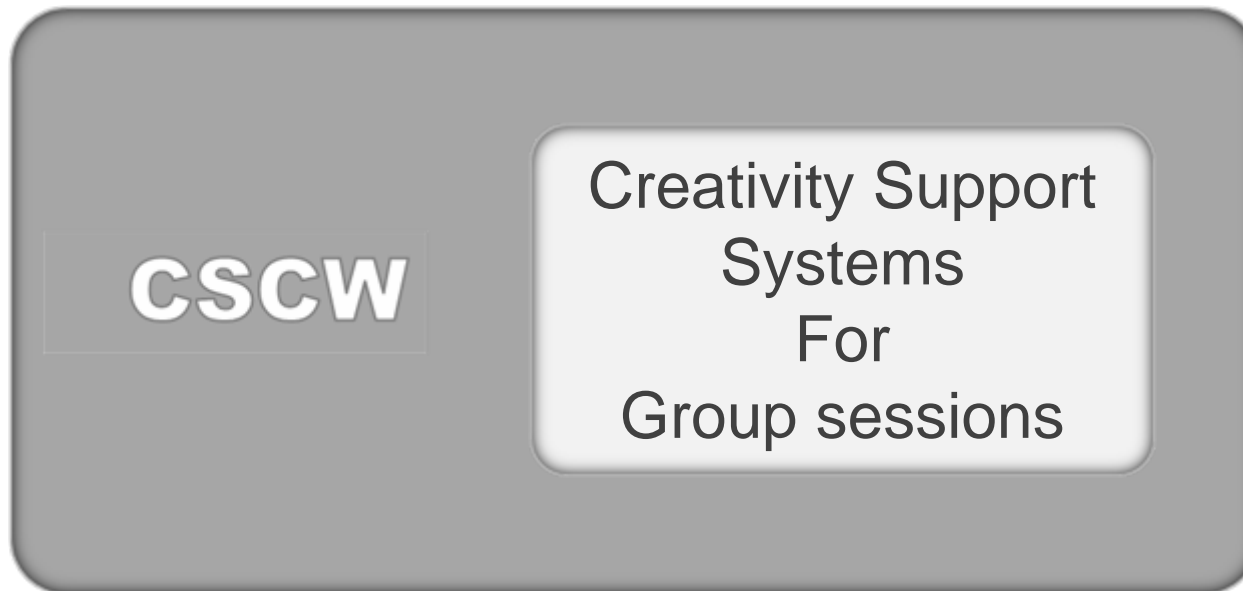
- ≡ “A team is a group of people with a high degree of interdependence geared toward the achievement of a goal or the completion of a task” (Thiagarajan and Parker, 1999)

-> in creative group sessions: goal is a creative product / a novelty

CSCW

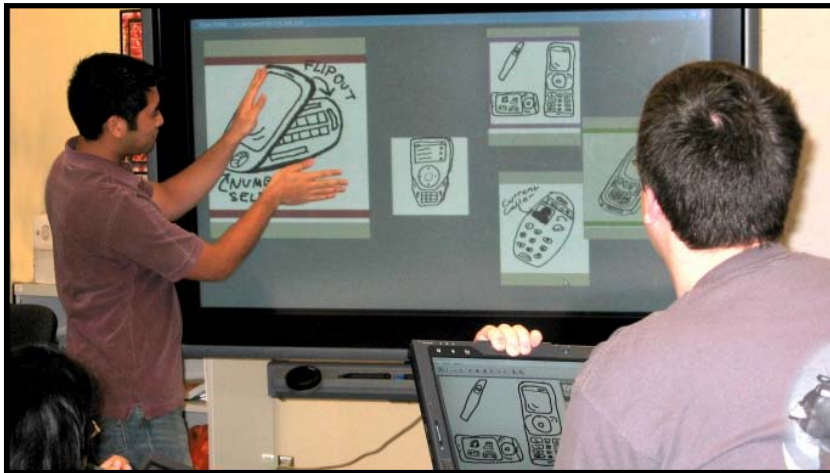
≡ Short for

- ≡ Computer Supported Collaborative Work
- ≡ Computer Supported Cooperative Work



Creativity Support Systems

TEAMSTORM



Hailpern et al. 2007

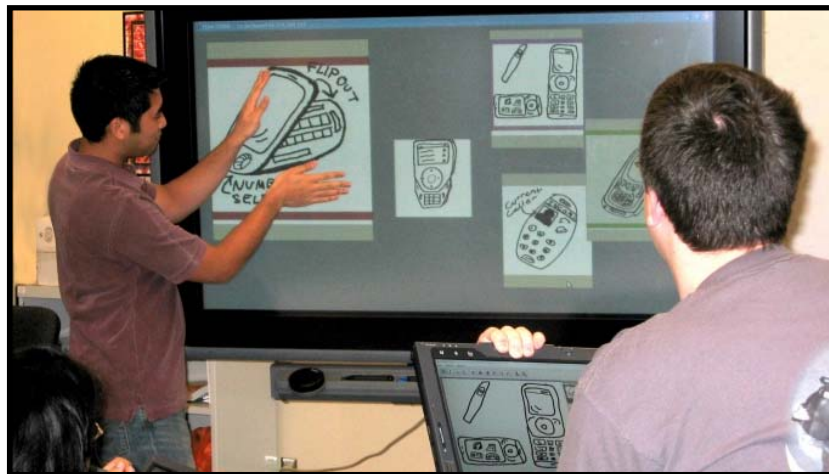
EBS for instrumented room



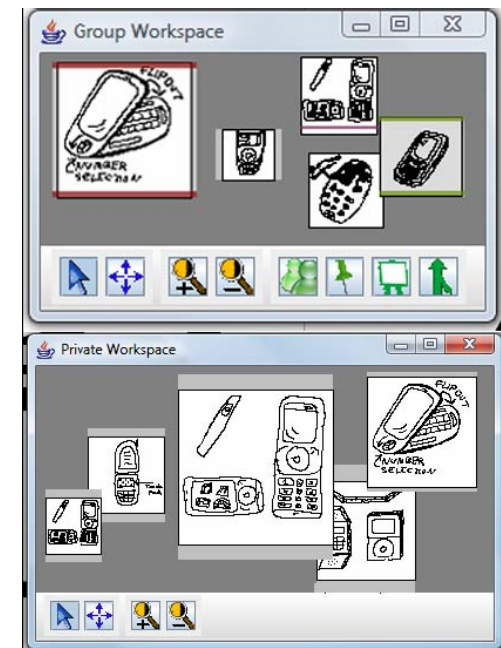
Hilliges et al. 2007

TEAMSTORM

- ≡ For early stages of design process
- ≡ Possibility to work with several design ideas in parallel
- ≡ One big display and several personal displays
- ≡ Personal and group workspace



Hailpern et al. 2007



Hailpern et al. 2007

EBS for instrumented room

- ≡ Brainwriting
- ≡ Idea-card method
- ≡ Instrumented room with
 - ≡ Table-top-screen
 - ≡ Several displays on the walls
- ≡ Post-its can be minimized/maximized and be arranged
- ≡ Creation of clusters



Hilliges et al. 2007

Design principles

- ≡ Prevent turn-taking
- ≡ Structure the idea space
- ≡ Support collaboration
- ≡ Evaluation

Evaluation - Problems

- ≡ How do you measure creativity?
 - ≡ Standard problems hardly adequate
 - ≡ “Specifying tasks is somehow at odds with the goals of supporting innovation or discovery” (Shneiderman, 2006)
- ≡ Creative processes may include domain specific characteristics
- ≡ Short time span of usual user tests is problematic -> no chance to detect strategy changes or learning effects

MILCs

- ≡ MILCs = Multidimensional in-depth longitudinal case studies
- ≡ Multidimensional : use of several investigation methods
- ≡ In-depth: deep involvement of researchers, close contact to the expert users
- ≡ Longitudinal: studies are conducted over a longer time period
- ≡ Case studies: reports about the experiences of a few individuals

Conclusion

≡ Quite young domain

≡ Supporting creative group work is becoming an important issue in science as well as economy