

Chapter 9

Collaboration and Social Media Participation

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Outline

- Introduction
- Goals of collaboration
- Asynchronous distributed interfaces
 - Different place, different time
- Synchronous distributed interfaces
 - Different place, same time
- Face-to-face interfaces
 - Same place, same time

Introduction

- Early computer users were isolated
- Now computer users are connected
- Online communities
 - Whatsapp, Facebook, Listservers, chat rooms, social networks
- Web as a playground or as a serious tool for creative work
- Collaborative interfaces
- Groupware, collaborative virtual environments
- How this emerging new computing environment will effect the quality of our work?

Introduction

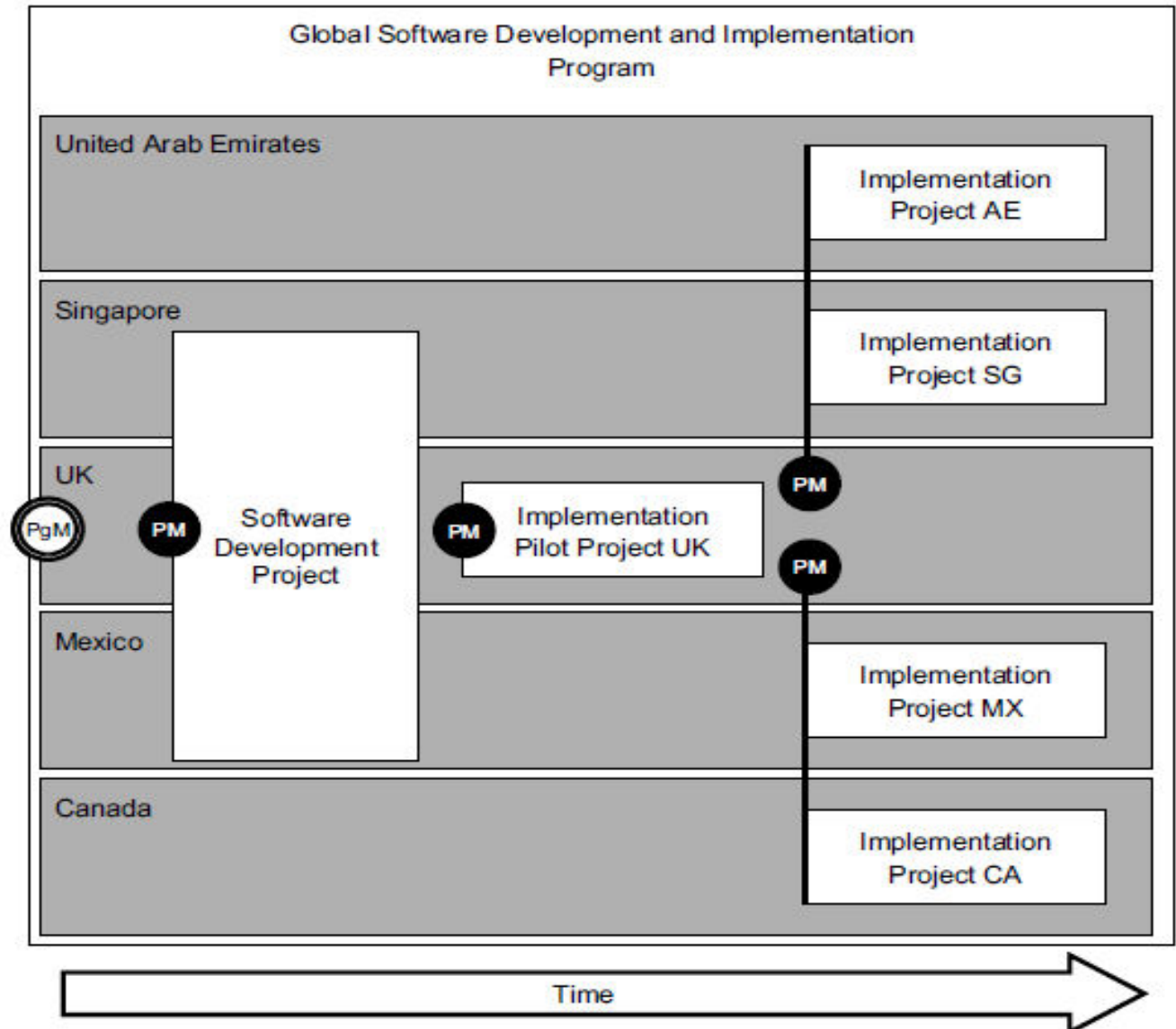
- To understand social dimension of technology, current trends lead to the suggestion
 - Most computer-based tasks will become collaborative (teamwork)
 - Collaboration as a motivating force for using computers
 - Collaboration --- a design requirement for most interfaces

Why Collaboration?

- Collaboration is essential as most of the companies are now moving towards global software development in this modern age
- *Global Software Development (GSD)* is carried out by teams of knowledge workers located in various parts of the globe developing commercially viable software for a company
- Distributed Software Development and Global Software Development are similar except that GSD teams are always global.

Global Software Development example

Local program of
global projects



Collaboration

- Collaboration is satisfying and productive
- It can be sought personally or imposed managerially
- Goals of Collaboration
 - Focused partnerships
 - Lecture or demo
 - Conference
 - Structured work processes
 - Meeting and decision support
 - Electronic commerce
 - Tele-democracy
 - Collaboratories
 - Telepresence

Collaboration

☐ Focused partnerships ---

- Two/three people who need each other to complete a task
- Examples: Joint authors, programmers debugging the same program
- Tools: Electronic mail, Instant Messaging, video conferencing

☐ Lecture or demo

- One person sharing information with many users
- Examples: Lab instructor can show his screen to the participants and he can see other screens, one exam is simultaneously given to many students
- Screen sharing software

☐ Conferences

- Allows group members to communicate

Collaboration

- Structured work processes
 - People with distinct roles collaborate on some task
 - Scientific journal submissions, reviews, revisions, and publication, university admission application processing
- Meeting and decision support
 - Shared and private windows plus large screen projectors enable simultaneous shared comments that may be anonymous
- Electronic commerce
 - It includes consumer browsing, comparing prices, B to B negotiations
- Tele-democracy:
 - To produce consensus through online conferences, debates and votes

Collaboration

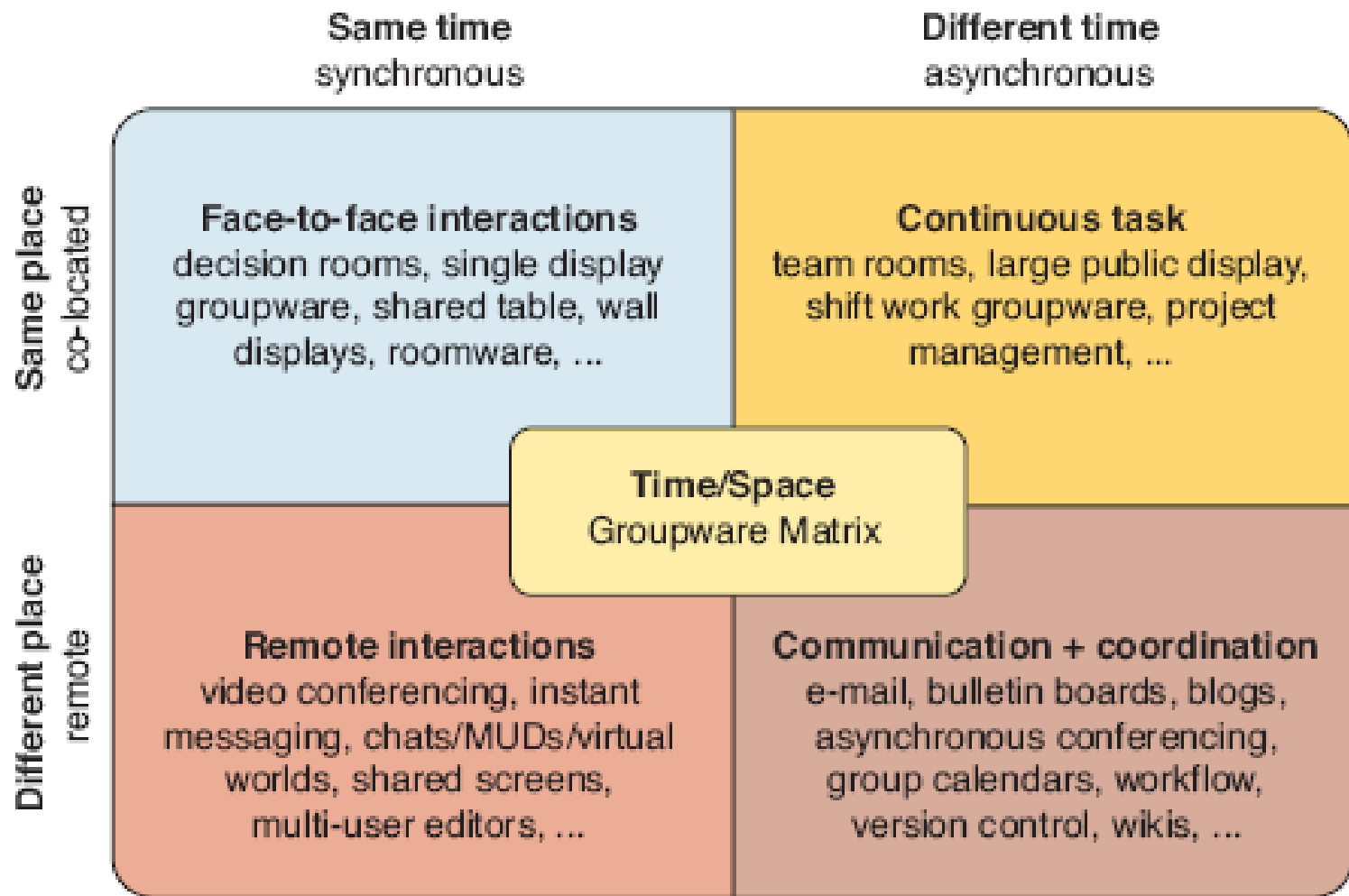
□ Collaboratories

- Novel organizational forms for groups of scientists or other professionals to work together across time and space, possibly sharing expensive equipment such as telescopes or orbiting sensor platforms (which are designed to produce high resolution imaging of earths etc)

□ Telepresence

- Enable remote participants to have experiences as if working physically together

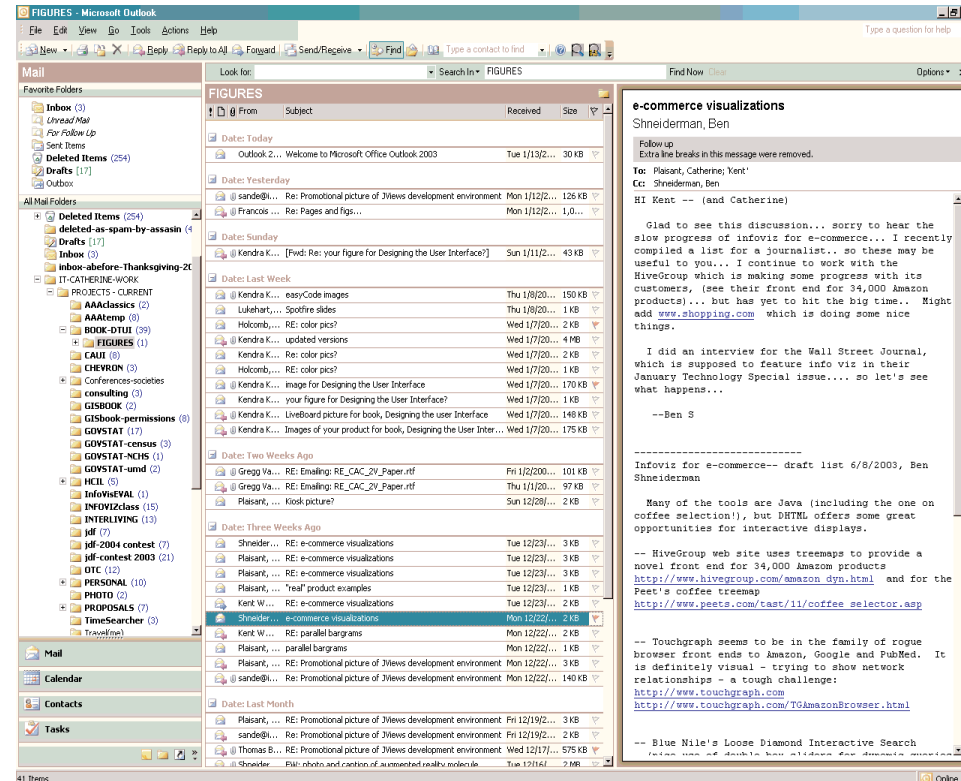
Time/space matrix model of group-supported work



Asynchronous Distributed Interfaces: Different Place, Different Time

■ Electronic mail:

- can be too loosely structured
- transient (brief)
- tools
 - filtering
 - archiving
 - mailing lists
 - discussion groups
- typically text-only, but increasingly includes other structured objects
 - graphics
 - sounds
 - animations
 - video

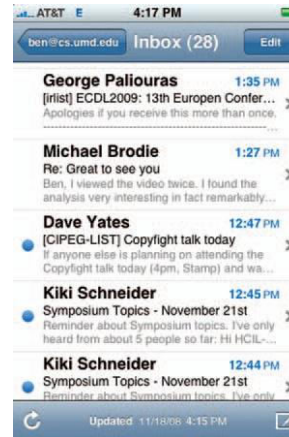


Asynchronous distributed interfaces: Different place, different time (cont.)

■ Electronic mail (cont.):

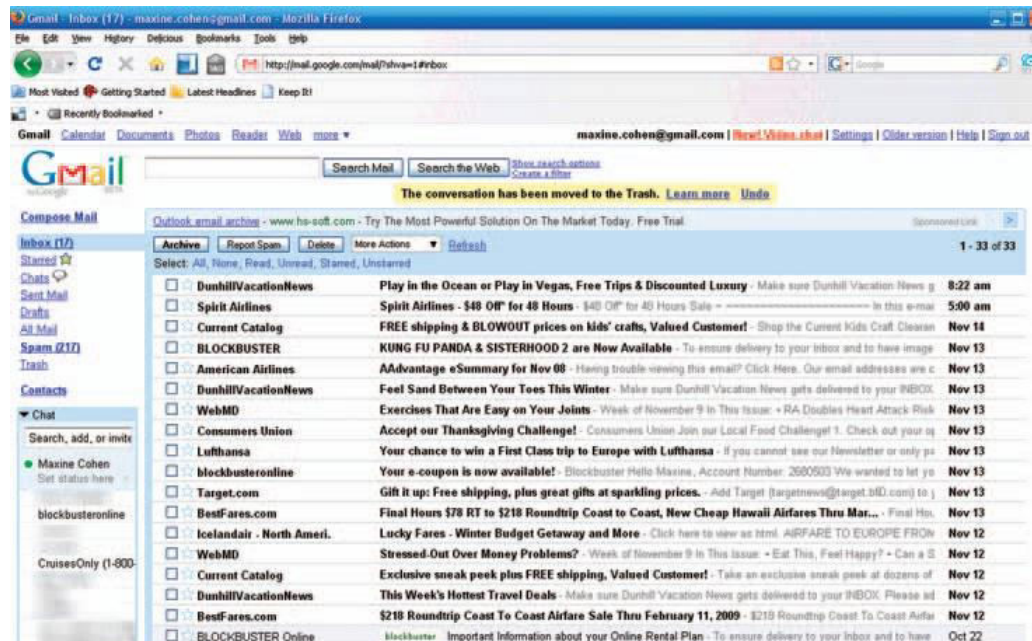
- Email on mobile devices
- Online directories
- Web services with E-mail

- E.g. Hotmail, and Yahoo! Mail



E-mail message on an iPhone

Google's web-based email (Gmail)



Asynchronous Distributed Interfaces: Different Place, Different Time (cont.)

- Newsgroups, listservers, discussion boards, conferences, blogs, and wikis
 - Focused electronic discussions by group of people
 - Listserver
 - individual must subscribe to receive e-mail notices
 - may be moderated by a leader
 - may be mail reflector
 - users can get flooded with listserv e-mails
 - server machine keeps searchable archive or past notes and subscriber list
 - Discussion board
 - Messages can be re-ordered chronically
 - Each message a short one-line heading and a long body
 - Message can contain questions and answers, an offer to buy or sell

Asynchronous Distributed Interfaces: Different Place, Different Time (cont.)

- Newsgroups, listservers, discussion boards, conferences, blogs, and wikis
 - Online conference
 - While groups can carry out their business using newsgroups, listservers, and discussion boards, additional features are often provided in online conferencing tools
 - voting and discussion on issues
 - online directories of users
 - online directories of documents
 - Web-logs/blogs and wikis
 - Blogs: Personal diaries that invite outside commenting. Blogs can focus on any topic; politics, music, travel
 - Wikis: Group editing spaces/ web pages, usually for coordination. Wikis are popular with project teams
 - Wikipedia
 - Online magazines and newsletters

Asynchronous Distributed Interfaces: Different Place, Different Time (cont.)

■ Online and networked communities

- Online communities are topically focused and geographically dispersed;
 - They exist for patient support groups
- The positive side is the facilitation of communication among like-minded people who have shared interests.
- Impact on offline communities
- Community policies & freedom of speech
- Network communities can be controversial
 - Hackers, hate groups etc
- Distance education courses

Synchronous distributed interfaces: Different place, same time

- **Synchronous distributed applications**
 - **Group editing**
 - **Shared screens for customer assistance**
 - **Give demonstrations simultaneously at multiple sites**
 - **Allow sharing of information for various applications**
 - **Interactive games**

Synchronous distributed interfaces: Different place, same time (cont.)

- **Chat, instant messaging, and text messaging**
 - CHAT, and TALK
 - MUDS (multiple user dimension systems)
 - Instant Messaging
 - Text messaging and cell phones

Synchronous distributed interfaces: Different place, same time (cont.)

■ Audio and video conferencing

□ videoconferencing

- slow response times for entering and leaving session
- distracting background audio
- difficulty in determining who is speaking
- inadequate lighting
- difficulty in making eye contact
- small image size
- need for convenient turn taking
- need for document sharing



Face-to-face interfaces: Same place, same time

- **Electronic meeting rooms, control rooms and public spaces** Teams of people often work together in the same room and use complex shared technology.
 - Stock market traders view complex displays, receive orders from customers, and engage in rapid face-to-face collaboration to achieve a deal.
 - Brainstorming and design teams often work closely together and use technology to record events and outcomes.
 - In business meetings structured social processes for brainstorming, voting, and ranking can produce highly productive outcomes – allowing anonymous submission of suggestions and ranking of proposals
 - Meeting goals such as “How can we increase sale?”
 - Benefits:
 - Parallel communication promotes broader input into the meeting process and reduces the chance that a few people dominate the meeting.
 - Process structure helps focus the group on key issues and discourages irrelevant digressions and unproductive behaviors.
 - Task support and structure provides information and approaches to analyze it.

Face-to-face interfaces: Same place, same time (cont.)

- ☐ File sharing
- ☐ Shared workspace
- ☐ Group activities
- ☐ SMART Board
- ☐ Public spaces facilitate sharing
- ☐ Notification systems about news,
Weather, stock prices etc



Face-to-face interfaces: Same place, same time (cont.)

Electronic classrooms

- By giving each student a keyboard and a simple software, it is possible to an environment for collaboration, conversation and brainstorming. For example each student can respond to a professor's question by typing a line which is shown with the author's name on every student's display.
- Active individual learning experiences include using software during class time to:
 - Run business simulations to increase product quality
 - Perform psychological statistical analyses
 - Compose computer programs and search the Internet
- Small teams and large teams

Summary

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Class Task

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Favorites

- Inbox 24
- Sent Items 1

Dr Mahmood Niazi

- Inbox 24
- Drafts [19]
- Sent Items 1
- Deleted Items 778
- ABET
- Adel
- Admin work
- Advisor Role
- Collaboration
- Conference 1
- Conversation History

Faculty@KFUPM.edu.sa
Reference Request
Dear Dr. Mahmood Niazi, An applicant h... 9:23

postmaster@kfupm.edu.sa
Spam Quarantine Summary
EUQ Digest: mkniazi@kfupm.edu.sa Dea... 7:31

Tahir, Amjed
[SEWORLD] Lecturer/Senior Lecture
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- Junk Email 111
- Drafts 119
- Sent Items
- Deleted Items 34
- Archive

Hotmail Team

Flags keep messages on top A new twist on an old feature Each day, new messages arrive and push down older ones in your inbox. That makes it

Yesterday

- contact@expatriates.com expatriates.com: SAR 25500 / Hyundai Tucson, 2010, automatic, 95000 KM. Excellent condition in use of university professor Thank you for using e
- Amy Ormond 5 Lionel Grove, ST4 Good Morning, Hope you are well? The contractor has been out to the property for the window: It does need a locking mecha
- Amy Ormond RE: 5 Lionel Grove Good Morning, I will confirm how much this will be and come back to you. Kind Regards Amy Ormond Lettings Co-ordinator t.

This month

- Amy Ormond RE: 5 Lionel Grove Hi, The gas safety certificate is not due to August next year, but I can still ask the contractor to attend to see what he issue is wi
- Amy Ormond RE: 5 Lionel Grove Morning, Your welcome. Depends if these were issues when the previous tenant was living there. I have asked a contractor to a
- UBL Digital Tax Payments Made Easy! No preview is available.
- e.statement@ubl.com.pk UBL Go-Green transaction alert: 20*****85 Dear Mr./Mrs./Ms.MAHMOOD KHAN NIAZI, Below is the transactional detail of your Account 20*****85