Collaboration

Chapter 10

• Goals of Cooperation
  – Focused partnerships
  – Lecture or demo
  – Conference
  – Structured word processor
  – Meeting and decision support
  – Electronic commerce
  – Tele-democracy
  – Collaboratories
  – Telepresence

Time/space matrix

<table>
<thead>
<tr>
<th>Same Time</th>
<th>Different Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>Same Place</td>
<td>face to face (classrooms, meeting rooms)</td>
</tr>
<tr>
<td></td>
<td>synchronous distributed (shared editors, video windows)</td>
</tr>
<tr>
<td>Different Places</td>
<td>asynchronous interaction (project scheduling, coordination tools)</td>
</tr>
<tr>
<td></td>
<td>asynchronous distributed (email, instant messaging, conferences)</td>
</tr>
</tbody>
</table>
Asynchronous distributed interfaces:
Different place, different time

- Electronic mail:
  - can be too loosely structured
  - sometimes overwhelming
  - transient
  - tools
    - filtering
    - archiving
    - mailing lists
    - discussion groups
  - typically text-only, but increasingly includes other structured objects
    - graphics
    - sounds
    - animations
    - web pointers
    - video

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

- Electronic mail (cont.):
  - In 2003, AOL reported 80% of email that entered its system was spam suppressed by filters
  - Online directories
  - Web services with E-mail
    - E.g. Hotmail, and Yahoo! Mail
  - Email on mobile devices

\[\text{DILBERT} \]

\[\text{I'M ADDICTED TO E-MAIL. MY ENGINEERING MENTALITY WHEN I GET A MESSAGE.} \]

\[\text{LADIES THINK I'M OVERLY INFORMAL, AND DESPERATE TO COMMUNICATE ME.} \]

\[\text{HAD I BEEN TOLD THAT IT'S NOT A BOTHER TO ME.} \]
Asynchronous distributed interfaces: Different place, different time (cont.)

- Newsgroups, listservers, discussion boards, conferences, blogs, and wikis
  - Focused electronic discussions by group of people
  - Unmoderated or moderated by selected individual or group
  - May be moderated by a leader
  - May be read by anyone
  - May be subscribed to and accessed via news servers
  - Some news servers keep searchable archives of past notes and subscribers list
  - USENET newsgroups
    - Weekly group dedicated (more or less) to one topic
    - Use-oriented posting on bulletin board
    - Users can post as many previous notes and related comments as they wish
  - Bulletin boards
    - In addition to letters, may also include additional facilities
    - Note
    - Multiple subscribers of news
    - Online discussion of users
    - Online magazines and newsletters
    - Web-loggings and wikis

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 texting
  - CHAT, Internet Relay Chat (IRC), and TALK
  - Flamers
  - MUDS
  - Instant Messaging
  - LOL etc.
  - Texting 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
    • changed social status
    • small image size
    • potential invasion of privacy
    • need for convenient turn taking
    • need for document sharing

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

• Audio and video conferencing (cont.)
  – issues of ownership and control
    • private and public workspaces
    • identity of participants
    • location of actions
    • care with updating
  – Whether audio or video conferencing is more appealing than chat, IM, and texting, or more effective than asynchronous text, depends on the goals and the task environment

Discussion: Online and networked communities

• Discussion: Online and networked communities
  – Provide virtual community where it doesn’t exist
  – Distance education courses
  – Impact on offline communities
  – Group identity
    • Patient support groups
  – Need critical mass for synchronous (example: chat room)
  – Community policies & freedom of speech
  – Network communities can be controversial
    • hackers
    • hate groups
    • para-military groups
  – Reputation managers for online stores
Face-to-face interfaces:
Same place, same time

- Innovative approaches to work and learning include:
  - Shared display from lecturer workstation
  - Audience response units
  - Text-submission workstations
  - Brainstorming, voting, and ranking
  - Public spaces facilitate sharing
    - File sharing
    - Shared workspace
    - Group activities
    - Notification systems

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

- Colab and Liveboard
- SMART Board

- Sharing photos is very popular

Benefits of electronic meeting systems

- Parallel communication promotes broader input into the meeting process and reduces the chance that a few people dominate the meeting.
- Anonymity mitigates evaluation apprehension and conformance pressure, so that issues are discussed more candidly.
- The group memory constructed by participants enables them to pause and reflect on information and opinions of others during the meeting and serves as a permanent record of what occurred.
- 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.