Introduction

Teams: the Basis of Organizations

• Organizations are becoming information-based, and will thus be organized not like a manufacturing organization but more like a hospital, which is team-based.
• Hospitals:
  – Have specialty units, each with its own knowledge, training, and language.
  – Work in the units is done by ad hoc teams, assembled to address a patient’s condition and diagnosis.
• Systems that contain support groups are important because most people spend 60 to 80 percent of their time working with others.
  – Yet, people seem to feel they are most productive when they work alone.

Understanding Groups

Characteristics of Groups

• Collaboration is all about getting work done in a group rather than individually.
• Not all groups are the same. Some characteristics that differentiate groups include:
  – Membership: Some groups are open (anyone can join), some are closed (restricted membership).
  – Interaction: Some groups are loosely coupled where the activity of each member is relatively independent of other members (salespeople with their own territories), others work closely together (project team).
  – Hierarchy: Some groups have a chain of command (fans of committees).
  – Location: Some members are co-located, some are dispersed.
  – Time: Duration (Some groups are short-lived, some are ongoing). Time intensity (Some work intensively at times, others do not).
• These characteristics illustrate that providing computer-based support for groups is not uniform because of the many variations.

Types of Groups

• Authority groups: involve formal authority (and often hierarchy), such as boss and subordinates; membership closed; coupling tight.
• Intradepartmental groups: can have members all doing essentially the same work, often under the same boss; membership closed; interaction can range from tight to loose coupling; hierarchy.
• Project teams: generally have members who work full-time to accomplish a goal within a specific schedule; membership closed; coupling tight; hierarchy.
**Understanding Groups**

**Types of Groups cont.**

- Interdepartmental work groups: pass work from department to department (purchasing, receiving, accounts payable) in a chain, forming a super group; membership closed; coupling tight; no hierarchy
- Committees and task forces: formed to deal with a subject area or issue, then disband; does not require full-time work by the members; membership not too closed; interaction not as tightly coupled
- Business relationship groups: relationships with customers, groups of customers, suppliers, and so on; membership open; interaction loosely coupled; no hierarchy

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**Understanding Groups**

**Types of Groups cont.**

- Peer groups: meet to exchange ideas and opinions; activities of each member are largely independent of the activities of the other members
  - Membership can range from open to closed
  - Interaction loosely coupled
  - No hierarchy
- Networks: groups of people who socialize, exchange information, and expand the number of their personal acquaintances
  - Electronic groups: include chat rooms, multi-user domains, user groups, and virtual worlds, all forms of groups that have formed on the Internet to socialize, find information, entertain themselves, gain comfort, or just experiment with the new online world
  - Membership open
  - No hierarchy
  - Loosely coupled

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**Understanding Groups**

**Communities of Practice (CoPs)**

- CoPs are all about managing knowledge, capturing and spreading know-how, ideas, innovations, and experience
- In some enterprises, CoPs form the foundation of their knowledge management efforts
- Though informal, some CoPs have had a profound effect on their enterprise
  - Driving strategies
  - Creating new lines of business
  - Spreading best practices, and
  - Solving seemingly intractable problems
- CoPs resist being managed. But some enterprises have seen their value and have learned how to nurture them

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**DAIMLER CHRYSLER**

**Case Example – Community of Practice**

- To compete against the Japanese, Chrysler management reorganized the company into “car platforms,” such as Jeep, minivan, truck, and small car
- This change significantly reduced development time, but employees with similar jobs needed to communicate across the platforms, so some began meeting informally
- Rather than formalize these cross-platform groups, they became known as Tech Clubs (communities of practice) supported and sanctioned by top management
- They began to take responsibility for their area of expertise by conducting design reviews, and even revived the old idea of Engineering Books of Knowledge
- Creating the books has led to debates and discussions; thus, while they build practice standards, they also build community

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**Understanding Groups**

**Communities of Practice (CoPs) cont.**

- Identifying Potential CoPs – Companies can use CoP consultants to help employees interested in forming a CoP
- Providing a CoP Infrastructure – Executives need to give CoPs legitimacy because they lack resources and formal standing in the enterprise
- Measuring CoPs – To measure CoPs appropriately often means measuring their contributions nontraditionally because their effects may only show up in a team member’s department, not in the community’s work
Understanding Groups

Network Armies

- These sets of individuals and communities are aligned by a cause
  - So they are as permanent as their common agenda
- Their cohesive force is their value system
- Their communications are open, taking place in forums that anyone can join

Network Armies cont.

- Network armies have existed for a long time, but they can now suddenly appear with a lot of power because of three developments:
  1. High-speed information flows due to a common language (English) and communication system (Internet)
  2. The geometrically expanding power of networks (adding one person geometrically increases the number of interconnections), and
  3. The international visibility now afforded just about any cause
- Hierarchies have a tremendously difficult time fighting network armies because there is no single leader, simply a “hydra with many heads.”

THE OPEN SOURCE MOVEMENT

Case Example – Network Army

- In the open source movement, members are volunteers and none is paid
- They code for the fun of it because they like to fraternize with like-minded developers and be part of a worthy cause, such as “writing software that doesn’t suck.”
- The movement has a massive flat structure with:
  - Four “influencers,”
  - Six to eight distributors
  - 200 project leaders, and
  - 750,000 volunteer developers

THE OPEN SOURCE MOVEMENT cont.

Case Example – Network Army cont.

- It is not wise to underestimate the claims of network armies
- Microsoft, which raised the ire of the open source movement, has found that its past tactics for addressing competitors are not appropriate for dealing with this network army
  - There are no open source revenues, so Microsoft cannot undercut prices
  - There’s no one to negotiate with, so the movement cannot be bought and then taken apart
- All “negotiations” must be in public, and consist of actions, not words – which is what Microsoft is now doing
- Its executives are arguing against the movement in public forums, hoping to dissuade executives from using open source software

Systems to Support Collaboration

- Group Decision Support Systems (GDSS) have existed for 25 years
- Their intent has been to support the decision making of more than one person, working together to reach a decision
- One framework for categorizing the work of groups has time on one dimension (same time/different time) and place on the other (same place/different place)
Systems to Support Collaboration
Supporting Same Time/Same Place

- This has generally meant supporting meetings
- The Sad Truth
  - You will spend 800 hours + in meetings (30% of total work hours)
  - 240 hours plus = "wasted"
  - More hours than you usually spend on public holidays and annual leave!
- The problem with meetings:
  - Meetings can have many shortcomings
    - Lack of agenda
    - People arrive late
    - The necessary information does not arrive, and so on

Information Technology Can Help
- By eliminating some meetings (using e.g. e-mail instead)
- Permitting better preparation (discussing items online beforehand)
- IT improves the effectiveness and efficiency of meetings
- Can’t change culture!!!

Systems to Support Collaboration
Supporting Same/Same Presentations and Discussions

- In studying the use of a GSS in a presentation-discussion setting, two researchers hypothesized it would generate:
  - More opportunities for discussion
    - Using a GSS would eliminate the need to divide available airtime among potential speakers because participants could contribute simultaneously
  - More equal participation
    - Because the GSS provides many parallel communication channels, loud or strong personalities probably would not dominate the discussion
  - A permanent record of discussion
    - A GSS would capture a permanent electronic transcript of the online discussion
  - Improved feedback to presenters
    - Presenters anticipated more comments and more detailed comments
    - Additional comments and suggestions
    - Remote and asynchronous participation
- On the other hand, having people type while presenters are presenting could distract participants

Systems to Support Collaboration
Supporting Same/Same Collaboration cont.

- Information Technology Can Help
  - By eliminating some meetings (using e.g. e-mail instead)
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Supporting Different Place Collaboration

- Supporting Dispersed Groups
- Development of virtual teams: usually disband after their project is complete
  - Same time/same place: team meets face-to-face initially to develop the basic plan and objectives
  - Different time/different place: then they communicate by e-mail and do data gathering and analysis separately
  - Same time/different place: may have audio or video conferences to discuss developments and progress toward goals

Case Example – Same/Same Collaboration

- This electronics manufacturer installed a decision room with workstations arranged in a semi-circle on two tiers
- Up to 48 people could participate by typing in their comments to the topic at hand at a workstation
- Electronic Brainstorming - to generate ideas, simultaneously and anonymously
  - Issue Analyzer - to organize ideas
  - Voting tool - to rank ideas
  - Topic commenter to attach ideas already in system
  - Policy formation software to study alternatives
- Led by a facilitator, the annual three-day strategic planning meeting increased involvement (more comments by more attendees), and the planning process was more effective (the group considered issues from a company-wide perspective)
Managing Collaboration in Virtual Organizations

• With CoPs, network armies and global virtual teams becoming more predominant, how are such nontraditional collaborative structures to be managed?

• Job of executives (in managing knowledge workers) is not to tell them what to do (manage them) but rather tell them where the organization is going (lead them).

Managing Collaboration in Virtual Organizations

Motivating a Virtual Workforce

• One conclusion from a study of the open source movement led to the conclusion that executives of increasingly virtual organizations should think about expanding the kinds of motivators they use.

• The open source movement demonstrates that while money is a well-known motivator, gaining a high reputation among peers, taking pride in contributions, and being able to improve and use high-quality software are strong motivators as well.

Managing Collaboration in Virtual Organizations

Governing Virtual Organizations

• Executives of increasingly virtual organizations should consider adopting a governance structure that fosters self-governance by employees.

• While the open source movement appears to have all the trappings of chaos waiting to happen, it is actually very well disciplined because of its self-governance.

• Three important governance principles are:
  – Managed membership
  – Rules and institutions
  – Social pressures

Conclusion

• The structure of organizations is changing rapidly: flatter, less middle-management, greater focus on teams, collaboration across disciplines, times and locations, and the use of virtual teams.

• Technology is advancing to support these changes, providing the tools to communicate and interact, solve problems, and manage/document knowledge in this new environment.

Conclusion cont.

• IT-based collaboration tools change the collaboration process by altering who can participate, how they participate, and even the kind of work they do.

• Collaboration is at the heart of the business world, since “partnering” with others has become the standard style of work.

• For this reason, this area of IT-based collaboration support is likely to grow and mature quickly in the years ahead.