FUTURE

Actually, the technologies which will be given in this section are already being used by most of the corporations; however, day by day, they are developed and implemented. In terms of Team Management, three main technologies will have effects on firms in the future: These are Groupware, Electronic Meetings, and On-Line Technology.

1) GROUPWARE:

Groupware is the transition from the personal to the interpersonal computer. In other words, the user is a collaborative work group rather than an individual. It is the most common term now used in business communities to describe the general area of computer-augmented teamwork.

The following table shows Future Groupware Developments which will probably be effective as of mid-1990s (1).

Table 1:

	Same Time	Different Times
Same Place	• Low-tech computer aids for conference rooms commonplace. • High-tech, high-touch computer assisted tools financially practical and used. • Portable and desktop tools for team support grow rapidly.	• Team rooms are commonplace, with electronic aids. • Shift work groupware (e.g., international traders, factories) commonplace. • Shared work environments and telework centers grow,

		though gradually.
Different Places	• Greatly increased use of conference calls. • Conference calls with PC graphics and image commonplace. • Video conferencing continues gradual growth, with some use of computer aids, with an emphasis on portable units and -eventually- desktop video.	• E-mail and V-mail include strong group features. • "Total quality" and workflow support groupware commonplace. • Text filtering and "information refineries" commonplace in a few sectors.

An example where groupware is used is "total quality" methods which are increasing in U.S. companies. Over the next years, groupware will shift from inside, small teams to the complicated connections across teams. Especially, many teams will cross national boundaries. Furthermore, alliances and customer or supplier links will mean intercompany, as well as international collaborations.

2) ELECTRONIC MEETING:

Electronic Meeting is the use of audio, video, and computer technologies to facilitate information exchange, negotiation, problem solving and decision making within groups whose members may be separated by both space and time. Electronic Meeting is a part of Group Support Systems (GSS).

To understand the basic idea of Electronic Meeting, let us take a look at the figure below (2) :

A color monitor and a keyboard are in front of each person. All computers are linked to each other for exchanging and aggregating information. Software provides support for generating, organizing, and evaluating ideas and judgments. A technical facilitator runs the software and provides the brief instructions needed to operate the system. A second facilitator, who assists the group leader, helps the group work systematically through each step of the budget process. That is an "Electronic Meeting".

However, this setting does not necessarily mean that Electronic Meeting can only be limited in a room. The members can be spread out to other countries and they can attend the meeting while they are in different locations. In the future, it will be possible for a group of

Americans to meet electronically with a group in Japan or for a group of Canadians to arrange an Electronic Meeting with people in Australia.

At that stage, an application of Electronic Meeting can be very useful for us to realize the process (3):

Table 2: Goal/Outcome Directed Meeting

	Resources (People and Technology)	
Present State (Problems)	Action Steps (Agenda)	Desired State (Outcomes)
Topic (step 1) Activity Topic (step 2) Activity Topic (step 3) • •	• Generate • Organize • Evaluate • Communicate	• TASK • RELATIONAL

Here, the purpose is to transform a group's present problem into its desired future through a series of action steps by means of a set of resources like people and technology. Action steps are the set of general activities. For example, a group (a team) generates information, organizes this information into alternatives, evaluates and selects the best alternatives, and communicates with the others.

2.1) Benefits of Electronic Meetings:

GSS Features	Potential Benefits
Simultaneity	• Opportunity for broader, equal and more active participation • More input in less time
Anonymity	• Less individual inhibitions • Focus on idea rather than contributor • Enhanced group ownership of ideas
Process Structuring	• Provides framework and process structures • Improved topic focus
Electronic Recording and Display	• Immediate display of data • Easier modification
Extended Information Processing Capacity	• Automates complex tasks • Creates easy accessibility to information and others' ideas

2.2) Potential Obstacles for Electronic Meetings:

- Artificial groups and tasks (Research Design Problems)
- Small group sizes (" " ")
- Poor fit between task and technology (" " ")
- The use of different GSS products
- The absence of a facilitator role

The GSS are intended to improve the effectiveness and efficiency of meetings. They are designed to increase the positive aspects of working in a group (like incorporating multiple viewpoints and sources of information, establishing group consensus and cohesiveness, etc.) and reduce the negative aspects of group meetings (i.e., topic wandering, domination by some members, inhibitions about contributing openly, inefficiencies because only one person can speak at a time, etc.).

There are two key factors that influence the effectiveness of a GSS. First, the GSS used in a meeting should provide the flexibility to adapt to specific group needs regardless of which approach is chosen to perform a task. Second, technical and process facilitation plays a central role in the productive use of a GSS. The facilitator must effectively match the technology to the group and its task and then help the group use the system appropriately to accomplish its task.

3) ON-LINE PROCESSING:

On-Line Processing requires instantaneous response to requests that occur at unpredictable times and rates.

In the 1990s, enterprises will move toward more on-line data processing to support decision making and operations. The hardware and software components of their computer systems, referred to collectively as the "technology", will continue to advance and be shaped in ways consistent with demands of the on-line enterprise.

3.1) Multiple Dimensions (Domains) of On-Line Technology in the Future [4] :

Figure 2:

	Technology	Operating Systems	Applications	Users
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Future	Improvements in all areas	Cooperative	Application Generators	Speech and Writing Interface
Today	Availability Reliability Costs Storage	OS/2 Unix DOS	CASE Commercial C High Level Languages	Graphical ICONs

These four domains show independent trends. Computer technology presses for higher performance, greater reliability, and lower cost. Operating systems try to create standards and cooperative interactions between multiple systems. Applications pursue ease of development and portability while user interfaces try to improve users' ability to interact with the systems in an efficient, easy-to-use, and memorable manner.

In response to growing competition and the need to improve productivity, almost all of the organizations will use On-Line technology to become faster and more effective at what they do. By the year 2001, On-Line Technology will likely be as pervasive as the telephone is today. Actually, those organizations that fail to become on-line enterprises will not be in business by that time.

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