Business Decisions through Mobile Computing

N. Raghavendra Rao
SSN School of Management & Computer Applications, India

INTRODUCTION

The existing ways of doing business are constantly changing. This is due to rapid changes in global economy. The opportunities in the present global markets have to be exploited at a rapid pace. The large centralized organizations which have established themselves over a considerable period may find it very difficult to introduce or diversify their product range in the present globalization scenario. They need to realize that managing technical knowledge, as well as innovative process in conducting business, is the way to remain competitive in the global market. Every business enterprise needs unique challenges to face in its sector. It is high time that they take advantage of the opportunities available across the globe by making use of the expertise of the global virtual teams. This chapter talks about a model for creation of global innovation model by global virtual teams who can design a product through the components of Information and Communication Technologies (ICT). Schelda Debowski (2006) rightly states that "Virtual Knowledge teams rely on Information technology to communicate" (p. 73).

NEED FOR GLOBAL INNOVATION MODEL

Business enterprises need to move from a traditional approach to a new global development approach. This approach will take care of the entire product development process. The product development process is required to cover from the design through production to marketing the product. Business enterprises have to understand the value of sharing resources, reducing costs. and using advanced technology to gain competitive edge in the market. The knowledge management framework adds value to the dynamics of business enterprises. Further, it is useful in the present business environment where the processes are getting shortened through rapid technological advancements. The model recommended in this article provides an overview of the components of intellectual assets, advanced concepts of Information and Communication Technologies (ICT) and global virtual teams. Further, it illustrates how these components facilitate in creating a global innovation model by a global virtual team. While explaining about the performance of geographically-dispersed cross–functional development teams, Deborah Sole and Amy Edmondson (2002) state that: "Some findings do indeed suggest that demographically-diverse groups outperform homogeneous groups" (p. 590).

Intellectual Assets

Intellectual assets or intellectual capital are two words mentioned frequently in the present knowledge economy. The word *capital* or *asset* suffixed to *intellectual* is not used in strict accounting terminology. It is only a term referred to *intangible assets*. It may be noted that the meaning of both terms is the same. It is interesting to note the observation of Nick Bontis (2002) on intellectual capital: "The intellectual capital of an organization represents the wealth of ideas and ability to innovate that will determine the future of the organization" (p. 628).

The components of intangible assets are generally classified under four headings. They are: (1) human-centered assets, (2) infrastructure assets, (3) market assets, and (4) intellectual property. It is apt to recall the observation of Stephen E. Little (2002) on knowledge creation in global context: "The speed of technical and infrastructure changes in business practice together with a new understanding of the centrality of intangible assets to wealth creation has brought the silicon valley paradigm of innovation to prominence" (p. 369).

Human-Centered Assets

Special skills, knowledge, and entrepreneurial ability of the employees of a business enterprise fall under this heading.

Infrastructure Assets

Established business process, methods, and information systems in an organization will enable them to conduct their business smoothly.

Market Assets

These represent business enterprise brand image, distribution network, and the agreements such as licensing and collaboration.

Intellectual Property

Employees contribute their knowledge and specialization skill to develop a product or service. This is considered to be the result of the application of their minds. It is protected under law as patents, copyright, and trademarks. These are considered as intellectual property.

The above classified assets are playing a key role in the present business scenario. It has become a necessity for business enterprises to formulate a strategy to make use of their intangible assets for the competitive advantage in their business. Adopting the concept of intellectual capital by a business enterprise leads to innovation and intellectual property.

It is apt to recall the observation of Marcha L. Maznevski and Nicholas A. Athanasslov (2003) who state that "the technology part of the knowledge management infrastructure has advanced rapidly in the past decade, with innovations appearing ever more quickly in recent years" (p. 197).

GLOBAL VIRTUAL TEAMS

Generally, a team consists of members with different kinds and levels of skills. The roles and responsibilities are assigned to them. The purpose of a team is to work for a common goal. The advanced concepts in information and collaborative technologies support the members of global virtual team who are geographically away from each other and assigned a task to accomplish.

In this context, it is interesting to recall the remarks of Arjan Raven (2003) who states: "when resource requirements for a task are high, a traditional team approach may not be the best approach. It may instead be possible to use a team – COP (Communication of Practice) hybrid, starting with lower levels of resources and formalizing the structure as the potential benefits become clearer. A Pure COP may also be given as an option to the members who are passionate about the task and are prepared to take more risks. It is also more likely that a COP member will see the importance and potential benefits and will work on the task, even if it isn't officially part of his or her job description" (p. 299).

INFORMATION TECHNOLOGY CAD/CAM

CAD/CAM is a term which means computer-aided design and computer-aided manufacturing. It is a software product designed to make use of digital computers to perform certain functions in design and production. This concept provides a scope to integrate the two distinct functions, that is, design and production in manufacturing organizations. Mikell P. Groover and Emory W. Zimmers, Jr. (2004) clearly explain that "Computer-Aided Design (CAD) can be defined as the use of computer systems to assist in the creation, modification, analysis, or optimization of design functions required by the particular user firm" (p. 23). Developing a new product or redesigning an existing product is considered to be a market driver for any product development process. The actual product design is done through CAD. The steps involved in the process required for manufacturing a product on the basis of a design are taken care of by CAM. Finished products result from adhering to the steps in the process followed in CAM. The steps involved in the process are process planning, resource scheduling, preparation of bills of materials, production scheduling, and monitoring the process through controls.

In the present globalization scenario, customers across the globe are the Market Drivers. Manufacturing enterprises have started thinking of design of their products as per the requirements of the market drivers. On the basis of market requirements, product design takes place by using CAD Software. The next step would be planning with process, resource scheduling, bills of materials, production schedule, and control. The documentation process for these activities can be carried out through CAM Software. In the present CAD and CAM Systems are based on Interactive Computer Graphics (ICG). Mikell P. Groover and Emory W. Zim-