

Supporting Communities of Practice in the Electronic Commerce World

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INTRODUCTION AND BACKGROUND

The phrase *communities of practice* has entered the lexicon of our world today. It implies some sense of closeness, intimacy, and connection with people bound together through mutual interest in something (Wenger & Snyder, 2000). As the pace of change is increasing and technology and information overload is becoming an issue, the time available to nurture relationships in the real world is becoming threatened (Baker & Ward, 2002). At the same time, our need for answers and quick access to solutions through the exchange of knowledge and experience is growing exponentially. Knowledge management, as a practice, focuses on making effective use of the intellectual capital that is found in the network of relationships connected to a business or organization (Bate & Robert, 2002). This is a perfect match for the business that is engaged in e-commerce to provide its stakeholders with opportunities to build relationships, to find answers and solutions, to exchange knowledge, and to gain a sense of community deriving from the relationships with the business.

This article discusses the potential for small businesses to develop and nurture their virtual communities on the Internet. There is also discussion of the technical foundation needed to make this happen. A virtual community is “an electronic meeting place where a group of people gather to exchange ideas on a regular basis” (Powers, 1997, p. 52). Such communities “allow broad communities of interest (e.g., all stakeholders) to coalesce around specific products and services” (Nambisan, 2002, p. 392). A community of practice is not necessarily always a virtual community. But virtuality greatly increases the potential for development of such a community that can be of great benefit to all stakeholders in this relationship.

A virtual community represents more than just the activities involved in e-commerce or shopping online. Visiting a site and seeking information about

a product may be the “portal” into involvement in a virtual community supported by that e-commerce retailer. Buttons and links to chat rooms, to Internet groups, and/or to similar retailers selling similar products are all part of the experience. Viewing the relationship with the business as the gateway to other relationships allows one to visualize the vast potential for community building through that gateway. If the business understands the potential benefits of providing this community building service, they will recognize the importance of sound technical infrastructure to support the efforts.

A well-designed technical infrastructure provides a strong foundation to ensure flexibility, scalability, and adaptability to meet the changing user requirements of a virtual community and address inherent economic fluctuations in the marketplace. Managing the IS resources, including hardware, software, data, procedures, and support personnel, is a difficult task in a virtual community because they are subject to over and underutilization based on market changes that are difficult to predict and control.

In his book, *How to Program a Virtual Community*, Powers (1997) defined five building blocks for a virtual community: inhabitants, places to see, things to do, a government, and an economy. Online members are inhabitants; often called avatars (or embodiments). A virtual community may have different places, locations, spaces, rooms, chat rooms, or even theme parks for its online members to visit. A community may also have different objects, props, and activities for online members, encouraging interaction among members who may be present at the same time.

The *governance* in a community includes support and trust in a democratic environment with commands and control, as well as rules and regulations that govern the cyber interaction. This includes monitoring online activities, managing the resources,

and gathering the utilization and visitation statistics that are needed to make the optimal decisions to facilitate future growth. In fact, one of the downsides of the concept of communities of practice is the uncontrollable nature of the informal structure that develops (Wenger, McDermott & Snyder, 2002). Lastly, the economy is the exchange of things of value, from local and foreign currencies, objects, and games to banners, promotions, memberships, and events. The online community must have some kind of economic and/or knowledge exchange in order to maintain itself in cyberspace.

ONLINE COMMUNICATION PROCESSES

Technologies mirror modern society based on democracy, civil structure, culture, and education (Barber, 2001). Stakeholders expect open systems that have flexible and dynamic links within and outside their communities. The following sections discuss four different communication architectures: one-to-one, one-to-many, many-to-many, and peer-to-peer. Understanding the different nuances of these approaches to communication will help businesses to design their virtual community effectively.

One-to-One Communication

One-to-one communication in a virtual community is the digital interaction between a host and a member, or more commonly, between two members. This kind of relationship is direct, simple, and easy to understand and manage. A virtual community with many of these linkages will have a lot of individually driven communications and is often described as a private or closed system. It is a one-way communication at a specific instance of time. The host or members have direct control in this one-way, vertical, or horizontal communication. This is an isolated and non-interactive relationship in a computer-mediated environment and is probably not the best approach to building a virtual community.

One-to-Many Communication

The one-to-many architecture allows the host to distribute information effectively to all members in a

group. This is usually a closed system, as members have to register to receive information or be on a mailing list obtained by the host site. A one-to-many virtual community is nearly always a vertical communication process. If the customers would like to send in feedback, a many-to-one communication process begins. Thus, one-to-many communications can be viewed either as a one-way or a two-way communication process. This method is highly centralized and often minimally interactive, and the host has maximum power in controlling information within the group. However, it does provide a cost-effective way to communicate with members of a community.

Many-to-Many Communication

The many-to-many communications architecture may better solve the problem of market fragmentation as it integrates many groups together at one place through common interests and linkages. Kozinets (1999) suggests that effective virtual communities are like “electronic tribes” structured around member interests. *Communities of commerce*, a phrase originated in 1995, are the Internet-based communication channels for suppliers and customers (Bressler & Grantham, 2000). A many-to-many communication structure is an ideal way for the online members to interact with others and an innovative design that accelerates communication velocity at low cost. For a large, fragmented, and unorganized group of vendors who are seeking to reach buyers in the same market, communities of commerce provide a many-to-many communication structure for them to meet electronically on the Internet. While the communities of commerce evolve, clusters of communicating groups are formed on the Internet, albeit with some limitations based on cultural and language differences. In this interactive, many-to-many community, members have to learn how to manage communication effectively to gain market recognition and other members’ support.

Peer-to-Peer Communication

The latest design in virtual communities is a totally market-driven, peer-to-peer (P2P) communication network. According to the TechEncyclopedia (2001), a P2P network is “a communication network that allows all desktop and laptop computers in the

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