A Case Study

of Online Community

by

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ABSTRACT

This dissertation is a case study of online community. The study focused on an analysis of the University of Alaska's PortaCom computer conferencing system during the period from September 1991 to May 1992. PortaCom was analyzed from the perspective of conventional community theory, making it possible to determine how PortaCom does and does not conform to traditional models and providing a foundation for understanding how it constitutes community in new ways.

This research builds upon three different models: solidary community -- the self-contained, Gemeinschaft community; neighborhood -- a group with a common identity existing within a larger group context; and personal networks -- an ego-centered approach that focuses on the ties individuals have, rather than the interactions among the individuals located in a particular area.

This study assesses the conceptual and empirical value of these models for analyzing, describing, and understanding PortaCom as a community. Data were obtained by means of direct observation, participant observation, focus group sessions, interviews, questionnaires, and information automatically collected by PortaCom's host computer.

Analysis indicates that PortaCom both limits and expands "community." Although face-to-face and telephone interaction are the most important channels for most relationships and activities, PortaCom provides an environment for engaging in certain behaviors not normally found in the offline world and for gathering in groups in unique and fulfilling ways. It combines certain aspects of neighborhoods and personal networks which facilitate new social opportunities.

The study calls for the establishment of online anthropology as a branch of anthropological study to develop the means and perspective for the analysis of online environments and social structures.

DEDICATION

This dissertation and the many years of hard work that it represents is lovingly dedicated to my mother who made pursuing my dreams a reality.

ACKNOWLEDGEMENTS

I have incurred numerous debts, both professional and personal, in pursuing this research. My students at the University of Alaska Southeast cheered me on from the outset and remained steadfast supporters throughout. My friends, many of whom read my work and helped me distinguish the forest from the trees, endured my many periods of intense focus and, incredibly enough, persisted in being my friends. The PortaCom user group provided not only an endlessly fascinating subject for research but also a home for the mind. And particular thanks to Bill Richards, who patiently explained the ways of higher education, endured a number of periods of mutual frustration, and rescued me more than once from abandoning this project.

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1. PROJECT OVERVIEW

A. Background

During the past decade, computer-mediated communication (CMC) has flourished, engaging millions of people in communication technologies and dynamics that are fundamentally new. The flourishing of CMC has happened quickly, leaving researchers searching for models and metaphors to facilitate research and discussion. One such metaphor that appears in the literature concerning one particular manifestation of CMC, computer conferencing, is computer conferencing as an "act of community."

While the literature contains many references to computer conferencing as an act of community (often referred to as "online community" or "virtual community"), almost non-existent is any exploration of two foundation issues related to the study of online community: 1) what does an "act of community" mean, and 2) how is computer conferencing an expression of that meaning? Thus, the first two issues faced by a researcher of online community are: 1) how is community defined? and 2) how appropriate is it, conceptually and empirically, to use this definition of community for analyzing, describing, and understanding the social structures that develop in a computer conferencing environment?

The value in addressing these questions is potentially very great in both practical and theoretical terms. Practically speaking, understanding online community will help software developers in the design of conferencing software and ultimately "groupware," hopefully making the online environment a more efficient, friendly, and productive environment in which to pursue community. This in turn helps educators, project coordinators, business

people, researchers, and others who depend on conferencing to be more effective in reaching their goals. Theoretically speaking, addressing these questions will help us understand why so many people are involved in the online world, what needs this involvement fulfills, what this involvement says about how our society is evolving, and how this evolution is changing the social patterns of those who use CMC.

B. Theoretical Basis

This research project builds upon an overview of three different models of community theory, solidary community, neighborhoods, and personal networks, as described by Wellman, Ahlbrandt, Bender and others. These models are briefly summarized as follows:

1) Solidary community -- an ideal community type, in which communities are self-contained, socially homogeneous, spatially bounded and ruled by tradition.

2) Neighborhoods -- smaller communities with boundaries and a group identity that distinguish them from the larger urban areas in which they exist.

3) Personal networks -- geographically dispersed, ego-centered networks that have limited or no group cohesion or identity and that are facilitated by the use of modern transportation and communication technology.

Using conventional community study models facilitates understanding how PortaCom constitutes community in a conventional sense and provides a foundation for understanding how it constitutes "community" in new ways.

C. Research Questions and Subject of Study

The subject of this study is PortaCom, a computer conferencing system that has resided on the University of Alaska Southeast's VAX mini-computer since 1988. Although strictly speaking "PortaCom" is the name of a particular piece of computer conferencing software, in this study all references to "PortaCom"

refer specifically to the installation of this software at the University of Alaska Southeast.

PortaCom is home to over one hundred conferences covering a variety of topics and over three hundred members of varying involvement. I selected the PortaCom system as the subject of this study of online community for three reasons. First, I have had a great deal of personal experience on the PortaCom system, using it extensively since 1990 in the capacities of teacher, student, project organizer and participant, conference organizer and participant, researcher, system operator, and network explorer. Second, during the past three years I have observed many references to "the PortaCom Community" by PortaCom users as well as group behaviors that implied the presence of some form of community. And third, members of exploratory focus groups held at the beginning of this project unanimously agreed that they considered PortaCom to be a community, although they did not specify in what respect.

The following two research questions drove this research project and guided this case study of PortaCom:

Research Question #1: Is PortaCom a "community"?

Research Question #2: If so, what is the nature of this community?

This study examines the PortaCom user group during the 1991-1992 school year (September 15, 1991, to May 15, 1992). The study uses: (a) qualitative data, including focus group sessions, direct observation, participant observation, key informant interviews, and journals, (b) system information about conference and user activity, and (c) data collected through the use of in-depth questionnaires designed to identify the presence of characteristics of the three models of community described earlier.

2. OVERVIEW OF COMPUTER-MEDIATED COMMUNCATION (CMC)

A. Defining CMC Within the World of Telecommunications

While the world of telecommunications is vast and complex, there are perspectives that can help simplify it for the non-technician. One of these is viewing it in terms of the four different kinds of information that are transmitted using telecommunications technology:

Table 2.1: Four Kinds of Transmitted Information

Kind of Information	Typical Content	Typical Equipment
data	text	computer
graphics	pictures	fax
sound	talking, music	telephone, radio
video (sound assumed)	moving pictures	television

These are not arbitrary distinctions. As machines become more powerful and more capable of facilitating different kinds of information, the overlap among information, content, and equipment grows proportionately. For example, television can be used to send data, computers can send pictures, and pictures can contain text. In addition, machines are available (and under a constant state of further improvement) that can send many of these kinds of information simultaneously. Regardless of how these kinds of information are facilitated, each has its own use, appeal, benefits, and drawbacks.

There is a fifth kind of transmittable "information" that should be mentioned: realia, as they are commonly known in the world of instructional technology. Realia are things (books, tapes, letters, objects) that are sent through the mail. Because realia are not transmitted electronically, they are excluded from this discussion.

Computer Mediated Communication (CMC) is typically concerned with the

first kind of transmittable information, data, as transmitted by computers. As most of this communication occurs via the telephone system, and to a lesser extent via local area networks, a rough working definition of CMC from an end user perspective is as follows:

> **CMC**: using computers to send and receive text via the telephone system or local area networks.

There are a number of different activities that could be included in a study of CMC. The six primary CMC activities are as follows:

1. Communication networking -- using online software tools (such as electronic mail, electronic bulletin boards, and computer conferencing, which are discussed later) to develop and maintain a geographically dispersed communication network.

2. Data base searching -- searching online data bases of information, usually organized around a theme, such as education, agriculture, and medicine.

3. Interactive ordering/purchasing services -- using services which allow users to order information or goods.

4. Videotext -- reading videotext, the newspaper-like service that typifies much of what a general purpose online utility like CompuServe offers. Typically included in a videotext service are daily news, weather, and other general information features.

5. Entertainment and playing games -- engaging in interactive "fun" software, such as *Dungeons and Dragons*, and simulations.

6. Software acquisition -- capturing (often called "downloading") software programs for use on one's personal computer.

This research project is concerned primarily with #1 above. Thus the definition of CMC for the purpose of this research project is further refined:

CMC: using computers to send and receive text via the telephone system or local area networks for the purpose of developing and maintaining geographically dispersed communication networks.

A related term that is used frequently in the discussion of CMC is the term "virtual." To my knowledge the terms "virtual space," "virtual community," "virtual reality," and so on have not been formally defined. However, the 1989 Oxford Dictionary does offer a computer-related definition of "virtual" which reads:

> Not physically existing as such but made by software to appear to do so from the point of view of the program or user. (p. 674)

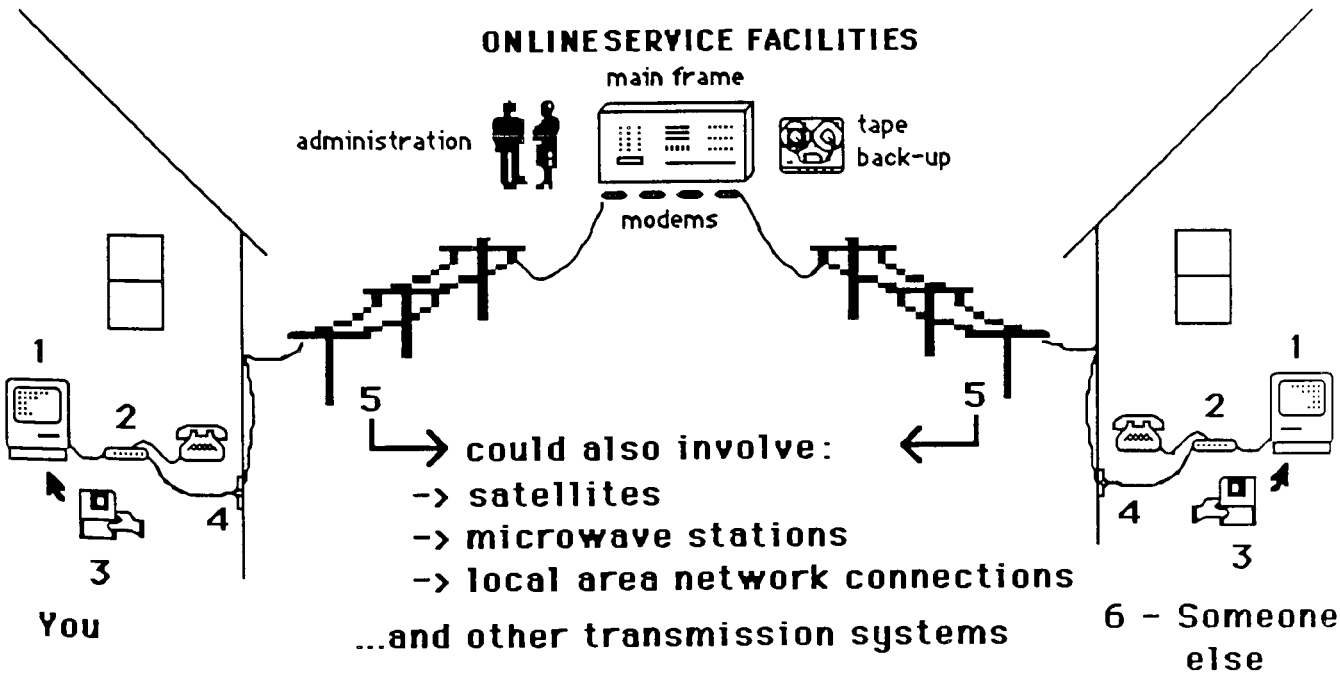
Thus "virtual" means "simulated," and virtual phenomena are phenomena electronically simulating a particular experience.

As the term "virtual community" appears in the literature, it seems most often reserved for the world of computer conferencing, as other electronic media are not group-based or not yet interactive enough to simulate group experience. For the purpose of this research project, a virtual community is considered a CMC-based community. Online community and virtual community are synonymous. Virtual space is the electronic environment in which CMC occurs. The words "online" and "virtual" are used synonymously.

B. Description of a Typical CMC Network

A typical CMC network consists of a group of micro computers remotely located from one another that are joined together for the purpose of communication, or bridged, via one or more powerful centralized computers (main frames, mini computers, or, more recently, powerful micro computers) that facilitate online communication. From a technical point of view, there are six components of a typical CMC network. These are depicted in the figure that follows:

Figure 2.1: Components of a Typical CMC Network



1. Microcomputer or terminal. Any common microcomputer, such as an IBM PC or Macintosh, which supports serial communications. Serial communication capability has been a fairly standard feature of microcomputers for the past five to seven years.

2. Modem (and optional telephone). Modem is an acronym for "modulate-demodulate," a technical term meaning "change-unchange." Normally, computer information cannot travel over the telephone lines because it is comprised of digital signals, whereas the telephone line requires analog signals. A modem modulates the signals from digital to analog and back. As the figure shows, modems are needed on both ends of the communication path. The optional telephone allows for voice communication when the microcomputer is not being used for online communication.

3. Telecommunications software. This allows the microcomputer to use the modem and perform online functions.

4. Telephone line and jack. A standard telephone line such as the kind

found in any home or business.

5. Communication path. An electronic pathway connecting the computers in the CMC network, usually synonymous with "the telephone system."

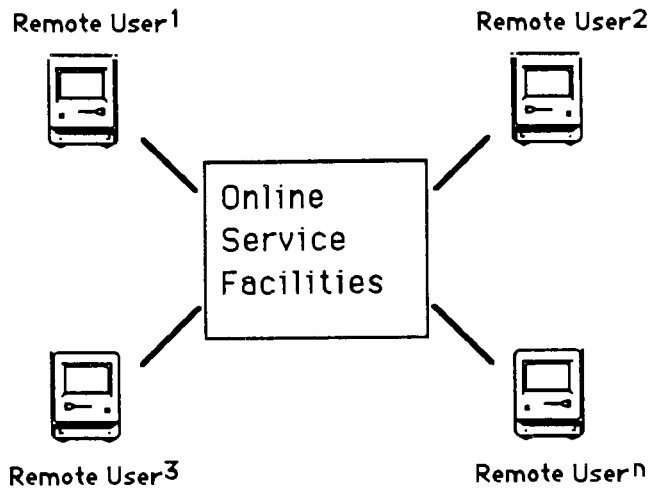
6. Online service facility. In very rare circumstances people telecommunicate directly between micro computers. The vast majority of online communication uses an online service to facilitate communication, such as the UACN, CompuServe, a private electronic bulletin board, or any of the hundreds of services that have been developed in the past decade. Much like any postal service, a facilitating online service consists of two primary components. First, it provides centralized technology that delivers and coordinates communication. Technology typically consists of a central computer, modems, tape back-up systems, communication software and an assortment of other kinds of software and hardware peripherals. Secondly, it provides centralized administration that grants user identifications (USERIDs) that allow people to access the system, maintains and updates equipment and software, sells time on the system and bills users, establishes standards that guide the use of the system, and other activities.

There are also elements of human agency that are a part of any CMC project, such as project goals, user training and resource allocation. However, as the focus of this section is a description of the technical aspects of a CMC network, elements of human agency are excluded from this discussion.

Three points need to be made concerning the "remote users" identified in Figure 2.1 which relate to a CMC system's bias toward group communication, a quality of CMC networks that will become important in the discussion of community later in this thesis. First, while only two remote users are pictured, in fact a typical CMC network supports many users. The number of remote users is limited by the capabilities of the central computer, including the number of incoming telephone lines, processing speed, memory, and so on.

The diagram below depicts this in simple terms:

Figure 2.2: Maximum Number of Users Accommodated by a CMC Network



The "nth" remote user represents the maximum number of users that can be technically accommodated by the system.

Second, the "remote users" are geographically dispersed and can be located literally anywhere provided a telephone connection can be established between them and the online service facilities, issues of affordability not withstanding. This connectivity increases the size and diversity of the user base. Third, users are dependent upon CMC software specifically designed to facilitate communication among them. This software is the topic of the next section.

C. Overview of CMC Software

Three basic kinds of CMC software have been developed:

1 - Electronic mail -- One-to-one communication

2 - Bulletin boards and mailing lists -- One-to-many communication

3 - Computer conferencing -- Many-to-many (and one-to-one, and one-to-many) communication

This list does not represent an historical evolution of CMC software. Rather,

it represents a hierarchy of communication dynamics within the genre of CMC software. The nature of this hierarchy is the subject of the rest of this section.

In its specific, limited sense, electronic mail (known colloquially as "email") refers just to the exchange of private, one-to-one communication between two network members. This communication dynamic places obvious limitations on the kinds of communication that are possible: what if a user wants to send mail messages to a number of people, or what happens if users want group, instead of dyadic, communication? Thus, although electronic mail is considered interactive, its one-to-one orientation makes it a severely restricted kind of interactivity.

Electronic bulletin boards and mailing lists solve some of the problems of email. Bulletin boards allow individual network members to post public messages that could be read by everyone, just like physical bulletin boards. Mailing lists are a specialized application of electronic mail, facilitating sending a single message to multiple recipients. Both bulletin boards and mail lists are usually fairly crude in terms of facilitating communication. Typically bulletin boards do not allow people to send individual mail or allow groups to form private conversations independent of the other bulletin board readers. Updating and distributing mail lists can be so problematic that they are often maintained by one person, limiting group communication. However, unlike email, bulletin boards and mail lists provide the ability to post information easily so that a number of people can read it.

Interactivity does not become fully realized until the development of group-oriented computer conferencing, which allows both one-to-one as well as group interaction in which all conference members are able to see and respond to each message that is posted. Until recently, most multi-user mainframe and mini-computer systems have been packaged with electronic mail software, but usually not bulletin board or conferencing software. Even though many of the

first-studied applications of CMC concerned conferencing (Turoff, 1991), conferencing software was, and in many cases still is, considered an "extra" when purchasing a system.

It should be mentioned that extremely useful solutions have been developed that lie somewhere in between bulletin boards and conferencing. One of the most popular and well-developed are the "listserv" utilities employed by BITNET and Internet, two of the largest academic CMC networks in the world. In a typical listserv application, users join a mailing list devoted to a particular topic of discussion. Messages sent to the list are then re-distributed to list members, facilitating a crude kind of conferencing. Because messages also contain individual electronic mail addresses, private email can transpire between list members. However, there are a number of important differences between the listserv utility and a true conferencing system, such as the following:

1) Listserv utilities typically do not offer "threading," the automatic maintenance of connections between original messages and replies. Thus, tracing discussion is difficult, often impossible.

2) Searching old messages, for example, to find those written by certain people that relate to particular topics or contain particular words, is difficult, sometimes impossible.

3) Finding information relating to a particular listserv environment, such as user information and system status reports, is often difficult, sometimes impossible. Thus, while mail list and listserv utilities can be used to facilitate online group activity, they fall far short of providing an actual conferencing environment.

A special issue of Scientific American entitled "Communications, Computers and Networks" (1991, 265(3)) provides indications of future CMC trends. The evolution of CMC promises to embrace two basic elements: increased intelligence and multi-media. Intelligence will allow for more

flexibility, power, and personalization, while multi-media will allow the use of non-textual information, such as graphics, sound, and video. The paradigm of the networked platform will remain, promising to build on the connectivity and amplify the social environment that CMC currently offers. This is discussed in more depth in Chapter 10.

D. CMC vs. Other Conferencing Technologies

While a detailed comparison of audio, video, and computer conferencing might be instructive, it is beyond the scope of this thesis. The reader is directed to Johansen, Valle, Spangler (1979); it provides an in-depth analysis in this regard. It is sufficient to say that every conferencing technology has benefits and limitations that are best assessed in light of the goals and resources of those needing technologically-assisted conferencing. The purpose of this section is to highlight those advantages of CMC in general and computer conferencing in particular that specifically relate to their potential to involve users and to develop ongoing group activity, two qualities that will become important in the discussion of community later in this thesis. These advantages are as follows:

1. Two facts about CMC combine to empower the user as a participant: (a) CMC, from an end user's perspective, uses common personal computing technology, and (b) CMC leaves a record of what transpires in the form of text that can be easily manipulated by a personal computer. These features offer participants tremendous power in terms of being able to store, search, enhance, forward, and otherwise become personally involved in CMC activity. None, or very little, of this kind of power is available through telephone or video conferencing.

2. The online world has developed in ways that the telephone and video worlds have not, organizing in groups centering on particular topics and concerns. This ability facilitates online participants in finding groups that

interest them and, depending upon the system, in creating new group activities of their own. An explanation of the mechanics of this procedure appears in Chapter 4.

3. Computer conferencing facilitates a range of different kinds of communication dynamics within the same conferencing environment, such as large group, small group, and private communication, with far greater facility than either video or telephone conferencing.

4. While some commercial online services are quite expensive, large sectors of the online world have evolved in ways that are very affordable. In fact, it can be argued that CMC has flourished precisely because it is often "free" or extremely cheap to the thousands, perhaps millions, of academic network members. In contrast, telephone use has always involved a direct cost to consumers, and video conferencing between just two points is generally expensive ($200-$1400/hour in Alaska).

5. In addition to being geographically dispersed, or space independent, CMC is also time independent, which is often referred to as its "asynchronous nature." That is, while CMC is often capable of real time interaction, it is rarely used in this way. Instead, network members leave and pick up their messages at different times, as it suits their schedules. In fact, CMC's asynchronicity is often cited as one of its primary strengths, allowing flexibility in scheduling and reflection in communication. Both telephone and video technology offer a certain degree of asynchronicity in the forms of, respectively, record-a-phone technology and capturing video images on tape for delayed viewing. But neither facilitate interactivity or group activity when used in this manner and are highly dependent upon scheduling when used for conferencing purposes.

E. From Online Communication to Online Community

In retrospect, the evolution from email software to the group-oriented

software of bulletin boards and conferencing systems underscores a natural desire to take advantage of the tremendous connecting power of a geographically decentralized communication system to accomplish group tasks. Although the breakthrough often associated with computer conferencing is its ability to facilitate group-based activities, it offers more than just this ability. Conferencing offers communication tools as well as an overall environment within which to use them. It is the ability of conferencing to create an environment that has given rise to an evolutionary development: an online experience often referred to as "online community." The next chapter discusses concepts of community and how these concepts can be used to study CMC systems in general and the UAS PortaCom system in particular.

3. CONCEPTUALIZING AND STUDYING COMMUNITY

A. The Problem with Community

Community theorists generally share a common lament: the term "community" is so widely used for so many different purposes that the concept of community has become difficult to grasp or use in a meaningful way. A comment by community theorist Cohen is typical in this regard:

> Community is one of those words -- like culture, myth, ritual, symbol -- bandied around in ordinary, everyday speech, apparently readily intelligible to speaker and listener, which, when imported into the discourse of social science, however, causes immense difficulty (1985, p. 11).

Indeed, the social sciences use a number of terms to mean "community," such as "village," "social system," and "culture." Adding to the confusion are terms such as "global community" and "professional and technical community" (Hillery, 1984, p.30) which challenge common notions of "community as neighborhood." However the term "community" is used, it is difficult to deal with for a fairly obvious reason: It is often nothing less than our entire experience.

In 1953, community theorist Hillery tried to make sense of the multitude of definitions of community that he found in historical and social science literature. He analyzed 94 definitions looking for overlapping concerns and concepts, and concluded that:

> All of the definitions deal with people. Beyond this common basis there is no agreement (p. 116).

It should be noted that even this perspective could be challenged by some modern notions of ecological communities within nature that do not depend upon

the presence of human beings for their existence.

The problems associated with defining "community" transfer to defining "online community" as well. References to online experience as a community experience are often made without defining terms. The phrases "online community" or "virtual community" are used because some part of the online experience is reminiscent of some part of another experience associated with "community." This use of these phrases often goes unchallenged because the notion of community feels familiar and acceptable to the reader. McCreary (1990) is typical in this regard when she says:

> [Computer] Conferences have participants: conference participants are so often engaged in making decisions, drawing conclusions, setting policies, and so forth that it might be desirable to refer to such people as "citizens," for if we call the online collectives "communities," surely these communities have citizens (p. 125).

The idea is appealing, as long as we do not challenge her supposition, "[*IF*] we call the online collectives 'communities'" [italics and capitalization mine]. If we do, then we are led back to two primary questions:

1) What is community?

2) What is online community?

B. An Historical Overview of Community Theory

Much of the discussion in the literature about defining community takes place within the context of discussing how community has changed since the industrial revolution. This approach is taken here, for in discussion of how the theoretical understanding of community has evolved can be found definitions that are useful to this study. Wellman and others offer an overview of three major sociological perspectives, or models of community, that have been employed in the study of community: (a) solidary community,

(b) neighborhoods, and (c) personal networks. Each of these is examined so that they may be employed later in this study in the discussion of PortaCom as an online community.

1. Solidary Community

Although formal discussion about the nature of community is generally considered to be relatively new, less formal discussion has existed for some time. Plato's Republic, essentially an entire book devoted to the understanding and realization of community, was written over two thousand years ago. Poplin (1979, p. 125) credits Confucius, Aristotle, and St. Augustine with developing theories of community.

But community study did not develop as a focused area of research in its own right until the development of the modern social sciences in the nineteenth century. This is particularly true of sociology, in which community emerged as one of its primary concerns. Wellman (1979, p. 1201) went so far as to declare that the "community question" has set much of the agenda for the entire discipline of sociology.

If sociology can be defined as "the branch of the science of human behavior that seeks to discover the causes and effects that arise in social relations among persons and in the intercommunication and interaction among persons and groups" (Encyclopedia Britannica, 1974, p. 994), Wellman's declaration makes a great deal of sense. In fact, it can be argued that modern sociology arose primarily from the need to understand the shifts in community brought about by industrialization. As Bender (1991) points out, many of the founders of sociology were primarily concerned with understanding the change from rural to urban community -- from solidary to non-solidary community:

> The problem of community was one of the central concerns of the nineteenth-century social thinkers who were among the founders of

> sociology in Europe and the United States. Modernity, urbanization, and capitalism all seemed to threaten traditional patterns of social life. As they observed these processes, social analysts and philosophers began to discuss the problem of community in a way that raised a historical issue. How complete was the break with the past? What was the nature of that break? What form, if any, might community take under these radically new circumstances? This concern, needless to say, has continued unabated into our own time, inside and outside of academic circles (p. 3).

This concern with the shift from rural to urban living is well developed by Tonnies in his concept of polar ideal community types, *Gemeinschaft* versus *Gesellschaft*. This concept set the stage around the turn of the century for much sociological discussion in this area, particularly by Durkheim and his contemporaries (Poplin). Bender (1991) called Tonnies' concept "a typology that has proven to be one of...[sociology's]...most enduring and fruitful concepts for studying social change" (p. 17). The concept of *Gemeinschaft* vs. *Gesellshaft* is so important to community theory in general and this research project in particular that it deserves discussion here.

Gemeinschaft and *Gesellschaft* can be roughly translated into "community" and "society," respectively. Tonnies (1887) compares the two in the following way:

> All intimate, private and exclusive living together is understood as life in *Gemeinschaft* (community). *Gesellschaft* (society) is public life -- it is the world itself. In *Gemeinschaft* with one's family, one lives from birth on bound to it in weal and woe. One goes into *Gesellschaft* as one goes into a strange country.... Lawyers may speak of domestic *Gesellschaft* thinking only of the legalist concept of a social association, but the domestic

> *Gemeinschaft* or home life with its immeasurable influence upon the human soul has been felt by everyone who ever shared it. There exists a *Gemeinschaft* of language, of folks or moreover, or of beliefs; but, by way of contrast, *Gesellschaft* exists in the realm of business, travel, and sciences.... *Gemeinschaft* is old; *Gesellschaft* is new as a name as well as a phenomenon.... All praise of rural life has pointed out that the *Gemeinschaft* among people is stronger there and more alive; it is the lasting and genuine form of living together. In contrast to *Gemeinschaft*, *Gesellschaft* is transitory and superficial (pp. 37-39.).

To Tonnies, the advent of cities marked the beginning of a phase in Western development that can be called, to use Wellman's term, "community lost," meaning the loss of solidary community.

With the theory of *Gemeinschaft* versus *Gesellschaft* defining much of the debate about community, sociologists began developing other polar typologies to illuminate the transition from country to city life. Durkheim developed the theory of mechanical versus organic solidarity, referring to rural and urban social conditions respectively. Mechanical solidarity was the condition associated with rural life in which there was very little large scale division of labor. Most families performed the same tasks within their units. Organic solidarity was the condition of the city in which there is very great division and specialization of labor. He saw this division as organic because people had to perform their specialized tasks to function smoothly as a single, collective organism.

Weber, explicitly building on Tonnies' work, contrasted the conditions of country versus city life as communalization versus aggregation, whose difference he describes as follows:

> The *communalization* of social relationships occurs if and insofar as the orientation of social behavior -- whether in the individual

> case, on the average, or in ideal type -- is based on a sense of solidarity: the result of emotional or traditional attachments of the participants. The *aggregation* of social relationships on the other hand, is the result of a reconciliation and a balancing of interests which are motivated either by rational value judgments or expediency (1968, p. 91).

Community theorist Maine described the change from rural to urban life as the change from family orientation to individual orientation, with which came the shift from "status to contract" as the mechanism by and through which people defined their roles, obligations, and relationships with each other. Thus, with the dissolution of the family and the implicit organizational principles the family embodied, the formal contract became important as the organizing and defining mechanism for people within the larger urban society (Hillery, 1968).

To Tonnies, Durkheim, Weber, and Maine, the essential message of industrialization was clear. In the evolution from solidary community to society, people were losing their essential humanity. The shift from country to city was more than a migration pattern during a particular historical period. It also denoted a shift in the kinds of relationships people established within the aggregate society. Wirth (1933) put it bluntly:

> The distinctive features of the urban way of life...are the substitution of secondary for primary contacts, the weakening bonds of kinship, and the declining social significance of the family, the disappearance of the neighborhood, and the undermining of traditional basis of social solidarity. (In Reiss, p. 62)

Wellman questions the existence of truly solidary, pre-industrial communities. He notes that the community solidary model ignores stresses that have always existed in society as well as a great deal of data indicating that pre-industrial times were actually quite socially and spatially mobile (The

Community Question Re-Evaluated, 1988). However, he, like Bender and many others, recognizes the immense utility of the solidary community as an ideal and as a vantage point from which to consider the study of community.

2. Neighborhoods

The idea of lonely people living in large, impersonal cities devoid of community eventually came under attack. Foley's 1952 study, Neighbors or Urbanites? The Study of a Rochester Residential District, was one of the first empirical challenges to the idea of "community lost." In that study, Bender (1991) reports that Foley found cohesive communities within the urban area of Rochester. Other researchers, such as Bell and Greer, began reporting similar findings. Oscar Lewis studied Mexican families in cities (1959) and reported that communal ties were quite intact in the city, and even suggested that the process of adapting to the city strengthened them out of necessity. These studies were the beginning of the recognition of a research perspective that Wellman refers to as "community saved," in which researchers began to identify smaller communities, often called neighborhoods, that formed within larger geographic and population areas.

Other problems with the "community lost" research perspective flow from Lewis's observation and are obvious to us today. For instance, in his criticism of Maine, Hillery points out that there is a great deal of evidence to support the fact that families are important to city dwellers, just as contractual arrangements are important to village dwellers. Similarly, Weber's "communalization" is an obvious prerequisite for the maintenance of neighborhoods within cities, just as a certain amount of aggregate group behavior is necessary for even small communities to achieve community goals. In addition, there was much evidence to suggest that cities were not filled with isolated, lonely people. Based upon extensive research of one particular urban geographic entity, Wellman (1988) concluded:

> ...[F]ew urbanites will confess to living lives of lonely desperation. They know that they have supportive communities, and that their friends, neighbors, kin and co-workers have them as well (p. 81).

An important distinction must be made between neighborhoods and the more ideal folk village and other *Gemeinschaft*-type models. *Gemeinschaft* implies a self-sufficient community. McIver and Page's definition of community puts this concept succinctly:

> The mark of a community is that one's life *may* be lived wholly within it (1961, p. 8).

Thus, *Gemeinschaft,* or a truly solidary community, provides not only the primary source of relationships, but also the primary source of food, clothing, shelter, tools, recreation, and other activities and resources that combine to form a total community experience. In contrast, a neighborhood is only partly an expression of *Gemeinschaft.* While a neighborhood may be a primary source of some kinds of social interaction, personal relationships, and emotional fulfillment, there are other important aspects of one's life, such as work, resource acquisition, recreation, and so on, that often happen to some degree outside the immediate neighborhood.

While many of the characteristics of solidary communities are relevant to the discussion of neighborhoods, they are no longer assumed to be present to a great degree. For instance, Wellman has conducted studies of people within geographically bounded areas (1982) that are quite different in terms of their social homogeneity, transience, and so on. However, neighborhoods differ sharply from solidary communities primarily in that they are not self-contained and they are a designated geographic boundary *within a larger area,* quite often a city. Thus they acquire a limited kind of group status within a larger social setting and are concerned with group-based considerations and qualities, such as common identity, issues, and membership.

3. Personal Networks

Because sociological studies of neighborhoods were concerned primarily with events and relationships within the geographic area that comprised neighborhoods, they excluded a wealth of important information about the relationships people had *outside* neighborhoods. In reaction to this methodology, Wellman and others began examining communities as personal networks. According to Wellman:

> ...[T]he liberated argument has abandoned the local area as the starting point for analyzing the Community Question and inquired directly into the structure of primary ties (1979, p. 1207).

Wellman characterizes this research perspective as the "community liberated" (1979, p. 1206) perspective because communities are seen as being free from spatial boundedness and presuppositions. That is, personal networks are loosely bound, meaning that they do not have a common, defining locality and thus are not confined to neighborhoods or other geographic areas. This view is contrasted with *Gemeinschaft* in which common locality is essential. Because common locality is non-existent, personal networks are different from neighborhoods in that all needs are generally met on a geographically dispersed basis. Geographic dispersal is made possible by modern transportation and communication technologies that "liberate" us by facilitating geographically dispersed personal networks.

With the adoption of the personal network approach to understanding community comes a shift from consideration of community as a group-based event to community as a function of individuals. Personal networks are ego-centered networks rather than groups with collective identity. As a result, "liberated community" members are no longer viewed as members of single communities but as members of multiple, variably non-overlapping personal networks, such as work groups, neighborhood, family, and close friends. "Liberated communities" are sparsely knit in Wellman's terms, meaning that people from different parts

of an individual's personal network often do not associate with each other. This orientation is contrasted with *Gemeinschaft,* which assumes that people belong to one densely knit network that consists of people who are either directly or indirectly familiar with each other. In Wellman's words:

> Instead of being fully incorporated into a single solidary community, urbanites are seen as being limited members of multiple social networks, sparsely knit and loosely bounded (1979, p. 1204).

Personal networks blend *Gemeinschaft* and *Gesellschaft* in a unique way. While the folk village or the local neighborhood may not be the source of personal ties and resources that comprise one's personal community, the alienation of *Gesellschaft* is offset by one's ability to maintain community easily at a distance by using modern transportation and communication technologies. In addition, the scale and diversity of urban areas actually increases the potential for personal fulfillment by offering more resources and opportunities.

As the conceptualization of community yields to the new demands placed upon it by the realities of modernity, it becomes intelligible as a concept with a history as well. That is, the shift from "community as place" to "community as network" provides a comprehensive conceptualization of community that is applicable to all periods of history, across all types of communities, from folk village to city. In Bender's words:

> Once the notion of community is understood as a social network characterized by a distinctive kind of human interaction, it becomes possible to take community seriously as a historical phenomenon (1991, p.11).

The study of community then becomes primarily concerned with how people maintain the relationships that comprise their personal networks and the flow of resources used to sustain themselves.

It is important to note that, to Wellman and Leighton, the personal network perspective does not deny the importance of neighborhoods. Instead he acknowledges that what emerges are two predominant forms of community that exist side by side:

> In sum, we must be concerned with neighborhood *and* community rather than neighborhood *or* community (1979, p. 385).

C. Characteristics of Community

The purpose of this study is to use the three models of community presented above as perspectives from which to analyze PortaCom. To facilitate this analysis, characteristics of each model are identified and described below. The use of PortaCom will then be explored in light of these characteristics to determine how appropriate it is, conceptually and empirically, to use these models in analyzing, describing, and understanding the social structures within the PortaCom computer conferencing environment.

1. Characteristics of Solidary Community

The following characteristics of solidary community as an ideal type are germaine to this study:

a) Self-containment. All resources and institutions exist within the community (Tonnies, 1965; McIver, 1961; Bender, 1991).

b) Non-transience. There is little movement in and out of the community, a characteristic of an unchanging population (Wellman, 1984a, 1988b).

c) Social homogeneity. A majority of a community's members share a common racial or ethnic background (Wellman, 1987; Warren, 1978).

d) Spatial boundedness. The community exists within a designated area (Wellman, 1984; Warren, 1978).

e) Group identity. There is a stranger versus insider relationship between those within the community and those outside it (Cohen, 1985; Gudykunst, 1984).

f) Overwhelming presence of kinship members. Family members are often present within the community (Wellman, 1990; Warren, 1978; Bender, 1991).

g) Rules and customs are based on tradition and ascribed order rather than rationality and achieved order. Cultural inertia impedes the questioning of authority and thereby impedes changes of the social structure and social norms (Hassinger, 1986).

2. Characteristics of Neighborhoods

The following characteristics of neighborhoods are particularly important to this study:

a) Presence of issues of common concern. Members feel that there exist issues that relate specifically to their neighborhood. Warren (1968) reports that these constitute a defining quality of a neighborhood and can typically be ascertained through neighborhood activity groups.

b) Sense of neighborhood as an important social activity. Members of a neighborhood view their neighborhood as a distinct and important source of social activity.

c) Sense of attachment, identity, and membership. This sense is often marked by an attitude of insider versus outsider relationship and a defensiveness about one's neighborhood if criticized or attacked.

3. Characteristics of Personal Networks

This study was concerned with two aspects of the personal network approach to understanding community: the maintenance of personal relationships and the use of information resources. These are defined below:

a) Engaging in a wide variety of relationships. The following categories of interaction were addressed in this study:

1) Socially defined categories of interaction -- family, co-workers, others

2) Individually defined categories of interaction -- close friends,

those you like to spend time with, others

3) New Relationships -- meeting new people, making new friends

4) Educational-related categories of interaction -- teachers, fellow students

5) Giving and receiving emotional support on an on-going basis and crisis basis

6) Giving and receiving help with offline tasks

b) Acquisition of information for both professional and social purposes. Information is the catalyst for change, facilitating upward mobility, personal growth, and interaction with the world beyond one's immediate neighborhood or peer group. This study was concerned with how PortaCom users found and used information for their own personal development, and in particular, how important PortaCom was in this process.

D. Studying Online Community

The approach taken in this thesis to the study of online community rests upon viewing a CMC system from the vantage point of existing community theory. This approach facilitates understanding how a CMC system might be a community in a more conventional sense and provides a foundation for understanding how it might constitute "community" in new and different ways.

Three assumptions underlie this approach. First, it is assumed that while an online community may be different from the three models of community described in the previous section, it also may share some of the aspects of these models. Second, it is assumed that some of the aspects of these models may be present in a CMC environment but in new forms that are adapted to the environment of the online world. And third, this approach assumes that online community, like any modern manifestation of community, somehow limits and expands the notion of community.

The overview of the world of CMC presented in chapter 2 and the

description of the world of PortaCom presented in Chapter 4 make clear the substantial differences between the virtual and the non-virtual worlds. In a CMC system an electronic determinism circumscribes many of the activities and behaviors that are normally considered in community research. In particular, the non-physical, text-based, largely asynchronous nature of the virtual medium dramatically impacts what members can do within a CMC system. However, it would be a mistake to consider virtual gatherings inferior to non-virtual gatherings. While the online environment limits some typical community activities, it has the potential to accentuate and facilitate others and create new ones altogether.

It is the purpose of this study to understand how PortaCom activity fits with conventional community study, how the aspects of conventional community models are interpreted or adapted to the PortaCom environment, and what new behaviors or dimensions of community activity PortaCom illuminates. In Chapter 10 of this thesis I will discuss the most important qualities and characteristics of the PortaCom experience. In addition I will also discuss how the findings of the PortaCom study inform "community" theory. Of particular interest are the possible existence and nature of new dimensions of "community" revealed by the study of a virtual social system.

4. PORTACOM AS A SOCIAL COMMUNICATION ENVIRONMENT

The purpose of this chapter is to provide an overview of PortaCom as a communication and a social environment and to clarify terms and concepts that are important in the discussion of PortaCom and the questionnaire used in this research project. Specifically, the sections of this chapter and their objectives are as follows:

1. PortaCom as Part of the University of Alaska Computer Network (UACN) -- to describe where PortaCom fits into the overall scheme of computer communication within its host network, the University of Alaska Computer Network (UACN). The distinction between PortaCom and the rest of the services offered through the UACN is particularly important because the questionnaire often distinguishes between PortaCom and "online services other than PortaCom."

2. Who Has Access to the UACN -- to describe PortaCom access restrictions that limit PortaCom accessibility.

3. PortaCom as an Online Environment -- to describe the basic functions and character of the PortaCom system.

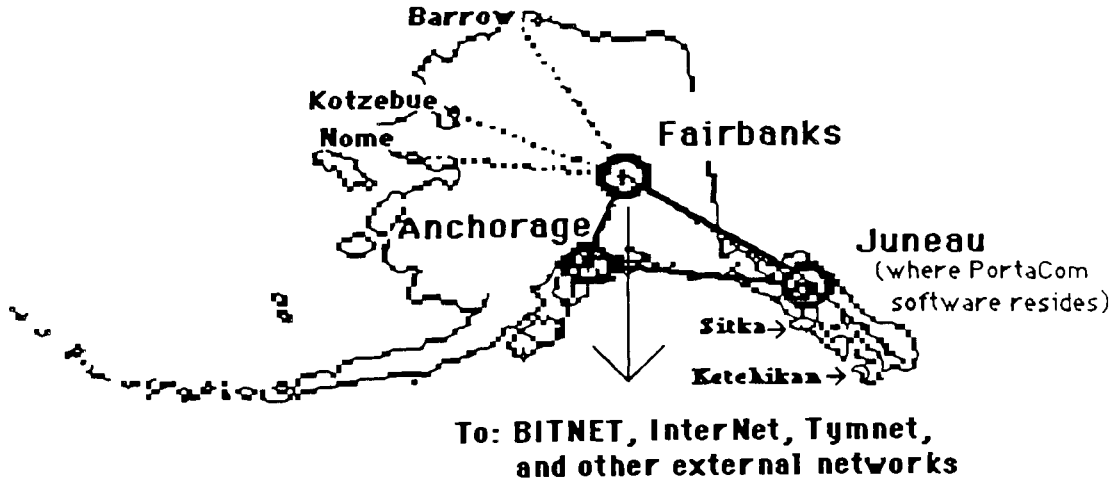
4. Conferences, Social Interaction, and Online Proxemics -- to describe PortaCom as a communication environment, particularly in terms of the ways in which people organize and interact within it.

A. PortaCom As Part of the University of Alaska Computer Network (UACN)

The University of Alaska Computer Network is the state-wide network maintained by the University of Alaska. From a technical standpoint it consists of mainframe, mini, and powerful microcomputers in Alaska's three

largest population centers -- Juneau, Anchorage, and Fairbanks -- which are also home of the University system's three main campuses. These three centers are depicted by the three circled areas in the following picture. The network's computers are connected by high speed telephone, microwave, and satellite circuits as depicted by the thick solid lines between Juneau, Anchorage, and Fairbanks in Figure 4.1. Access to larger networks such as BITNET and Internet is provided through the Fairbanks node, as depicted by the large arrow, to all other computers within the UACN.

Figure 4.1: Map of the University of Alaska Computer Network (UACN)



The dotted lines represent links to "local nodes" and "AlaskaNet sites." These sites are linked to Juneau, Anchorage, and Fairbanks and can be accessed by local numbers. That is, a user can dial a local number in, for example, Nome, and be connected directly to the Anchorage computing facilities, sparing local node users long distance charges. The UACN can also be reached out of state through a service called Tymnet. Tymnet access was established primarily so that university students and faculty could maintain toll free access to the UACN while travelling. Tymnet provides local dial-up access to the UACN from nearly anywhere in Canada and the United States.

The UACN is sometimes referred to as a "distributed access system," which means that all computing facilities in the system are equally available regardless of how and from where someone accesses the UACN. For example, a user dialing into the Fairbanks mainframe can then easily connect to the computing facilities in Juneau without incurring long distance charges. Because of distributed access, anyone accessing the UACN can have easy access to the Juneau computer, and thus PortaCom. A separate USERID is required for each of the three main facilities in Juneau, Anchorage, and Fairbanks, but generally anyone with a USERID on one computer in the UACN is allowed to have a USERID on any other computer within the system. Thus, anyone with access to the UACN theoretically can have access to PortaCom.

There are two primary communication systems on the UACN: (a) UACN email, and (b) PortaCom. UACN email is very popular throughout the UACN for two main reasons. First, because UACN email was developed and continues to be maintained as a state-wide system, mail travels easily among the three computer sites within the UACN. Thus, it is as easy to send email among accounts on the Juneau, Anchorage and Fairbanks computers as it is to send email between accounts only on the Juneau computer system. Second, UACN email handles all BITNET, Internet and other communication that comes from networks outside the UACN. Thus, UACN email offers great connectivity.

In contrast PortaCom is less popular for two reasons. First, it is available only on the Juneau computer system. While anyone with UACN access can access the Juneau computer system, users tend to use services on the computer on which their USERID resides. Second, PortaCom does not normally or easily interface with other communication networks, such as UACN email, BITNET, and Internet, and tends to be rather insular. Thus, PortaCom communication tends to remain just within PortaCom unless specifically, and somewhat laboriously, directed elsewhere. Most PortaCom users also use UACN email.

B. Who Has Access to the UACN

While anyone with access to the UACN also has access to PortaCom, the reverse is also true: those without UACN access are also excluded from PortaCom. It is important to understand how UACN access is limited in order to understand the ways in which the potential PortaCom user base is pre-selected. Limitations to UACN access fall into two categories: (1) administrative and (2) technical.

1. Administrative. PortaCom is only open to those with university affiliation, such as students, university researchers, faculty, administration, classified employees, and non-profit agencies who purchase USERIDs for their employees and clients, such as the Alaska Dept. of Education, Southeast Regional Resource Center, and other public institutions. However, "university affiliation" is a very nebulous term because many who want access to the UACN, Alaska's largest and most comprehensive computer network, may take advantage of a one credit course offered since 1988, called "Online Communication and Distance Education." The course meets two needs:

a. Access. Even though it is just a one credit course, it still grants full student status to anyone who takes it, thus making the UACN available to students for the cost of only one credit.

b. Training. The course provides the training needed to use the UACN, including instruction on how to use PortaCom. The need for training cannot be overstated. For example, University of Alaska professor Donna Gail Shaw administered a program that gave free USERIDs to teachers and reported that over ninety percent of the USERIDs were never used because of a lack of training.

The point is that while UACN users consist primarily of university students, conventional notions of what constitutes a student have been somewhat re-defined and expanded to include people who take the Online Communication course only to gain access to the UACN. It is not uncommon for

students simply to audit the course or not to finish it and receive a permanent incomplete. Personal experience indicates that in some cases they had no intention of being a "student" but simply wanted online access.

2) Technical. PortaCom access is also necessarily limited to those with computer and dial-up access. Dial-up access is particularly problematic. Of the approximately 250 communities in Alaska, only about 40 have local dial-up UACN access. Thus inhabitants of many communities have to dial long distance to access the UACN, at rates of up to $2.50/minute, effectively making access impossible in many remote areas. PortaCom users rarely live in a community without local dial-up access.

As of this writing, the problem of remote area access is projected to change dramatically. Alaska's main telephone carrier, Alascom, is promising access to the UACN from any point in Alaska for $4/hour during peak hours and $2/hour during off peak hours. These rates could change the size and diversity of the user base dramatically, allowing remote areas affordable access for the first time in the UACN's history.

C. PortaCom as an Online Environment

1. Logging on to the UACN

The following conventions are used to depict the online examples that follow:

- Everything that the computer prints to the screen looks like this, in Geneva 9 point font.
- Underlining denotes something that the user enters.
- *(Anything looking like this, in Geneva 9 point italics, is my annotation.)*
- The symbol "<--" denotes "press the return key."

As stated earlier, in order to sign onto PortaCom, the user must first sign onto Juneau's VAX computer on which PortaCom resides. There are a number of ways to access Juneau's VAX computer, including local area networks on the Juneau campus, regular dial-up lines directly to the computing facilities in

Juneau, or other computers in the UACN system that are linked to the Juneau campus, as described earlier. While initial steps for each of these ways vary, the basic sign-on procedure is the same. Below is a typical sign-on session for Terry Doe, beginning with the Username prompt:

Username: JSTD *(stands for Juneau Student Terry Doe)* <--

Password: *(Terry enters a personal password, which does not appear on the screen.)* <--

VAX/VMS version V5.4-3 on node ACAD1
13-JUL-1992 10:25 *** **** SH NEWS for SYLEGIS news on representative lists
24-JUN-1992 16:38 *** SHOW NEWS for SYLEGIS update - University legislation
(The above are general announcements to UACN users.)

Last interactive login on Friday, 31-JUL-1992 10:38
Last non-interactive login on Friday, 31-JUL-1992 00:00

$ *(The cursor sits here, waiting for the user to issue a command.)*

The dollar sign ($) is the VAX computer system's main prompt. At this point, the user can then proceed in a number of ways. For example, the user can:

- invoke a number of word processing, game, and other kinds of programs.

- issue system commands to, for example, check how much space one has on the VAX's hard disk, obtain a list of one's files, see who is currently on the system, and so on.

- enter the UACN mail system to use the state-wide mail system, BITNET, Internet, and so on.

It is also at this point that the user can enter PortaCom. However, a first time user of PortaCom needs a PortaCom ID, distinct from the UACN ID used to access the VAX. Obtaining such an ID and how this process serves as an introduction to PortaCom as a social system with community potential is the topic of the next section.

2. Obtaining a PortaCom ID

Users obtain PortaCom IDs either by creating their own through an automated system that does not require administrative help, or by requesting

one from a system administrator. Anyone on the VAX can have access to PortaCom, regardless of his or her reason for wanting it. This access is important because it emphasizes PortaCom as an open social environment rather than one that is used solely for more formal or defined purposes, such as to support course work or university business.

All new users receive the same introductory message. The following is what Terry Doe would receive after creating a PortaCom ID. I have added line numbers to facilitate discussion:

[1] Your PortaCom name has been added as "Terry Doe".
[2] Your initial password has been set to "watergate". Please change it to
[3] something else at your earliest convenience with the PortaCom command:

[4] CHANGE PASSWORD

[5[For more information about the PortaCom system, type HELP PORTACOM
[6[at the VMS system prompt ($). You can also get some basic information
[7] from within PortaCom by typing HELP.

[8] You have automatically been added to the following conferences:

[9] (Description of) Public Conferences
[10] (Description of) Private Conferences
[11] (Presentation of) new users

[12] Some additional conferences that are beneficial to new users are:

[13] (PortaCom) Helpline
[14] (PortaCom) Etiquette

This introduction provides the first indication that the user has entered a unique kind of social environment. Terry Doe is given four kinds of information that have to do with activity and behavior within the PortaCom environment, concerning, in order: (a) safety, (b) awareness of and involvement in one's social environment, (c) finding help and information, and (d) social norm orientation. Each is discussed in turn.

a. Safety. In lines 1-4, the user is advised to change passwords. A password is a word that only the user knows and that is required in order to enter PortaCom. Changing the password ensures that only Terry will have the

means to use Terry's PortaCom account, hackers notwithstanding, protecting Terry against what amounts to electronic breaking and entering.

b. Community awareness and involvement. In lines 9-11, Terry is informed that s/he has been automatically added to conferences that inform users about new activities within PortaCom. Membership in the conference **Description of Public Conferences** and **Description of Private Conferences** will inform Terry every time a new public or private conference is created. In addition, users are provided a description of the conference so they can decide whether or not to visit the conference. New users are also told that they are members of the conference entitled **Presentation of new users**. This conference gives newcomers a chance to introduce themselves "publicly" to the rest of the PortaCom user group. This introduction can be updated at any time.

c. Finding help and information. Lines 5-7 and 13 tell Terry how to find help. Lines 5-7 tell Terry how to find out information about PortaCom from outside PortaCom, while line 13 suggests Terry join the conference **PortaCom Helpline**, which helps new users find information and guidance that can aid them in maneuvering within PortaCom. **PortaCom Helpline** conference membership typically consists of experienced users who collectively pass on a detailed knowledge and understanding of PortaCom to newcomers.

d. Social norm orientation. Line 14 informs Terry of the existence of the conference **PortaCom Etiquette**, the sole purpose of which is to provide a forum to deal with issues concerning behavior within the PortaCom system. My experience indicates that it is rarely used, and that norm orientation happens more spontaneously in a number of conferences, wherever and whenever issues of appropriate behavior arise.

3. PortaCom User Interface and a Typical PortaCom Session

The phrase "user interface" refers to the way in which a computer program or environment presents itself to the user and the way it expects the

user to interact with it. There are two basic kinds of user interface: textual and graphical. Graphical user interfaces (GUIs) use icons and other graphical symbols. An icon-based version of PortaCom is available, but UAS has not purchased it. UAS's PortaCom installation uses the text-based interface, which is demonstrated in the following typical "sign on" process experienced by users whenever they enter the PortaCom system.

Once a user has created a PortaCom ID, s/he enters PortaCom by typing "PortaCom" at the $ and pressing the return key. A typical "sign on" and "log in" session follows. Again, I have added line numbers to facilitate discussion:

[1] $ Portacom <--

[2] Welcome to PortaCOM on ACAD1! For information on acquiring PortaCOM access,
[3] type HELP PORTACOM JXPCADD at the system prompt ($). Due to demand, inactive
[4] conferences and accounts will be deleted after 3 months.

[5] Welcome to PortaCOM (version 1.17G)!
[6] Please give your complete name.
[7] - Terry Doe <--
[8] Terry Doe *(PortaCom prints Terry's name on the screen.)*
[9] Please type your password: - *(Terry enters personal password, which does not*
[10] *appear on the screen.)*
[11] Tom Smith is present in (Contemporary) Families
[12] Sum: 1
[13] You have 2 unseen letters
[14] You have 2 unseen entries in Open Forum
[15] You have 4 unseen entries in (Ask) Dr. Vax
[16] You have 1 unseen entry in (Presentation of) New Users
[17] You have 1 marked entry
[18] You are in your mailbox

[19] What do you want to do? (Join) next conference <Open Forum>, Wait (for news), (Send a)
[20] letter (to), Quit, Other. *(This is the suggestion line.)*

[21] - *(This is the PortaCom prompt. The user can enter any PortaCom command here.)*

There are two basic kinds of text environments: command driven and menu driven. The VAX environment as presented in section 3.1 in this chapter is a good example of a command driven environment. The user is provided a prompt ($) and is then expected to enter a command in order to proceed. A menu-

driven environment provides a menu of choices from which the user chooses.

PortaCom uses a combination of these two kinds of text interface. It provides a suggestion line that acts somewhat like a menu, but with the option of using commands. PortaCom's suggestion line approach incorporates a certain amount of intelligence. PortaCom "guesses" what the user wants to do and provides that as the first option on the suggestion line. If s/he agrees with the choice, then s/he just presses the return key to invoke the command. Thus, in the example above, if Terry wanted to **Join next conference <Open Forum>**, s/he would press the return key. If s/he wanted to do something else, s/he would enter the command at the PortaCom prompt and press the return key.

Upon entering PortaCom, users are provided information that addresses their status in the PortaCom environment. Lines 3-4 remind Terry that there is a minimum level of participation s/he must maintain, lest s/he become a PortaCom member non-grata and have to re-apply for membership. Line 11 tells Terry who is on the system at that moment and where they are. In this case only one person is present, Tom Smith, who is in the conference **Contemporary Families**. It should be noted that Terry could initiate a quasi-real time interactive session with Mr. Smith, although such communication can be cumbersome and is, in my experience on PortaCom, infrequent.

Line 13 tells Terry the number of letters (private, one-to-one correspondence) that have arrived since the last time s/he signed on. In this case there are two. Lines 14-16 tell Terry the number of conference messages that have arrived since the last time s/he signed on to PortaCom. In the example above, Terry has 2 unseen entries in the conference **Open Forum**, 4 in the conference **Ask Dr. Vax**, and 1 in the conference **Presentation of New Users**. Line 17 tells Terry the number of marked messages. These are messages that Terry has already read but that s/he wants to re-read. They constitute old business needing further processing.

Finally, in line 18, Terry is told s/he is in the private mailbox in

which private letters are kept. Within PortaCom all users have private mailboxes and enter them automatically when first signing on.

4. Interacting On PortaCom

Each conferencing system has a different set of processes, defaults, and assumptions built into its interface. PortaCom's interface is designed in such a way that the user can read all unread messages in a fixed order by simply pressing the return key once for each unread message. PortaCom software always assumes that the user wants to read unread letters first. If there are unread letters, pressing the return key will scroll through each one in the order in which they were received. When all letters are read, PortaCom suggests (that is, provides as the first option on the suggestion line) going to the first conference containing a new message. Pressing the return key will take the user there.

Pressing the return key again will bring up the first unread message in that conference. When all messages in that conference have been read, PortaCom suggests the user go to the next conference with unread messages. Pressing the return key will take the user there, pressing the return key again will display the first unread message, and so on.

There are over one hundred commands and, at any point, the user can issue one of these rather than pressing the return key. A description of all PortaCom commands is beyond the scope of this thesis. However, an explanation of the four basic commands used in writing messages will be very helpful in describing the kind of communication environment PortaCom provides.

PortaCom supports two basic kinds of communication: 1) private letters that are sent to a single person, and 2) notices that are posted to conferences. Both of these are either: (a) comments to messages or letters posted by someone else, or (b) original messages that initiate communication. Each is discussed below.

a. Comments to a message or letter. After reading a conference message or letter, a user can choose to use the **comment** command in order to post a comment to what s/he has just read. The comment will be posted in the conference where it can be seen by everyone and will be threaded to the original entry s/he is commenting to by means of a shared subject line. Because of threading, users will always be able to determine the original entry and see it in its entirety. They will also be able to recall easily the original message, all comments to that message, and all comments to comments, enabling users to trace a discussion easily.

The user can also reply just to the person who sent the message by entering the **personal** command. This is also threaded to the original message the way a comment is. It should be mentioned that threading is a major distinction between UACN email and PortaCOM, and between electronic mail and computer conferencing in general. PortaCom's powerful **review** command allows users to recall threaded messages in a number of different ways.

b. Original messages. If a user wants to post a new entry that is not threaded to other entries having gone before, s/he uses the **new notice** command if s/he wants everyone in the conference to see it, or the **letter** command if s/he wants to send it to just one person. It is considered courtesy to introduce new topics with these commands rather than by using **comment** or **personal**, because they prompt for a new subject line; the new subject line indicates a change of topic. The four writing commands are related in the following manner:

Table 4.1: Comparison of PortaCom Writing Commands

Who sees it? ==>	Posted to a conference where everyone sees it	Only one person sees it
Response to something just read (uses same subject line)	COMMENT	PERSONAL
Starting new topic (not a response to a message--requires new subject line)	NEW NOTICE	LETTER

D. Conferences, Social Interaction, and Online Proxemics

PortaCom supports different kinds of conferences that form different kinds of online space which in turn encourage different kinds of social interaction and behavior. It is the variety of social interaction that gives PortaCom a rich social environment.

To help explore the different conferences and their implications for community and communication in online space, I use concepts found in Edward T. Hall's theory of proxemics. The basic premise of proxemics is that how people use and perceive physical space articulates their understanding of the nature of their community and the roles of people within it (Hall, 1982). To those unfamiliar with computer conferencing, the utility of proxemics in the study of the online world in which physical space is such an elusive component may not be immediately apparent. Yet to online researchers, online space is often discussed in terms of online architecture, that is, in terms of how people "arrange" their online space and themselves within it in order to achieve social goals.

Some of the architecture is user defined. That is, a generic "open" conference can be defined by the conference organizer as, for example, a cafe, town hall, or bar, each of which suggests certain social arrangements and kinds of behavior. However, this discussion is concerned with the broader

kinds of architecture that are built into the PortaCom software, the "givens" of the environment. In particular, it is concerned with the four kinds of environments that PortaCom supports: letters, open conferences, closed conferences, and read only conferences. These are discussed in terms of one of the main components of Hall's theory of proxemics: social distance.

The four types of PortaCom environments are described as follows:

1. Letters. Letters constitute private, one-to-one communication between two people. While it is possible to send a letter to more than one person, either by adding receivers or making use of PortaCom's "information copy" command, it is my experience that this is not commonly done.

2. Open conferences. In PortaCom these are called "public conferences." They are "open" in that anyone can join them without needing permission or special access. They are also publicized. That is, all PortaCom members see an announcement about its existence when it is created.

3. Closed conferences. Closed conferences are closed in the sense that the conference organizer controls who has access to the conference. In addition, the organizer can remove and exclude conference members. It should be mentioned that the PortaCom system operator has "global privileges" and can add anyone to or remove anyone from any conference. Portacom supports three kinds of closed conferences:

a) Private -- Publicized conferences.

b) Restricted -- Publicized conferences. The organizer sends invitations to those s/he wants in the conference, which they can accept or reject.

c) Protected -- Unpublicized conferences. Only its members know about its existence.

4. Read only conferences. These conferences are open to the public and publicized, but only the conference organizer can write entries. All other members of this conference else can only read messages.

These four kinds of environments are discussed in terms of Hall's four basic kinds of social distance, a cornerstone of his theory of proxemics. As the table below indicates, the four basic kinds of interaction environments in the online space of PortaCom are expressions of these distances:

Table 4.2: Comparison of Hall's Social Distances and PortaCom Environments

Hall's Categories of Social Distance	PortaCom Environment
intimate	private letters
personal	closed conferencing
social	open conferences
public	read only conferences

Each of these categories is discussed below.

1. Intimate distance -- private letters. Intimate distance in the PortaCom environment corresponds to sending and receiving letters, which occurs almost exclusively between two people, in contrast to conference communication, which always occurs publicly within a conference. The similarities between it and Hall's concept of intimate distance are:

a) The assumption of privacy is often assumed. Letters are completely private, which means they constitute one-to-one communication, compared to conferencing, which is public.

b) The presence of another is difficult, often impossible to ignore. For example, when I contacted members of a particular PortaCom conference last year to ask them to be questionnaire respondents in a research project, I sent each one a private PortaCom letter, even though it would have been far easier simply to post a single message in the conference asking for volunteers. I sent "letters" precisely because they are private and thus harder to ignore.

c) The expectation of response to an overture is very great. Because letters are hard to ignore, they are often used when a response is needed. This means of communication is contrasted with conferencing, which would

produce far too much to read if everyone responded to every message. Thus, in conferences, reading but not participating, often called *lurking*, is tolerated, and is often times implicitly and/or explicitly encouraged.

2. Personal distance - private conferences. Personal distance corresponds to PortaCom's closed conferences, which are open only to those people allowed access by the conference organizer, but within which communication is public. The similarities between Hall's concept of private distance and PortaCom closed conferences are:

a) The creation of boundaries between inside and outside people/groups. That is, there is an "us and them" situation, something implicit in a private conference. If there were not the presupposition of exclusivity in membership, the conference would be open.

b) The maintenance of enough space among participants for non-contact purposes, that is, for the articulation of non-intimate roles. Communication within a closed conference may be limited to the select few who are allowed access to it, but within the conference it is public and thus does not imply the degree of intimacy that a letter does.

c) There is some expectation of interaction. Because of the select nature of the group, and because closed conferences are often goal driven and more structured than open conferences, lurking is less likely to be acceptable. The expectation of some participation often leads a conference organizer to invite participants.

3. Social distance -- open conferences. Social distance corresponds to PortaCom's open conferences, which are open to everyone and within which all communication is public. The similarities between Hall's concept of social distance and distance in an open conference are:

a) Social distance is used for casual or less personal gatherings. Qualitative data suggest this is the case with PortaCom open conferences. Interaction in open conferences tends to be less hierarchical and less

structured.

b) There is little distinction between outsiders and insiders. This is the primary distinction between closed and open conferences. Anyone can join an open conference.

c. It is considered socially acceptable not to partake in the group activity. As mentioned above, lurking is considered acceptable behavior in open conferences.

4. Public distance. Public distance corresponds to PortaCom's read only conferences, in which only the conference organizer is allowed to post notices. The similarities between Hall's concept of public distance and the online distance implicit in PortaCom read only conference are:

a) There is a communication dynamic in which there is a clear distinction between speakers (and/or actors) and audience. Read only conferences support only this kind of dynamic and thus are explicitly hierarchical.

b) The expectation of response is practically non-existent. In the case of read only computer conferences, the expectation is completely nonexistent within the conference because response is impossible.

The various aspects of PortaCom's environments can be summarized in Table 4.3 that follows. The difference between column F and column G is that F refers to a separation between groups *within the overall environment* of PortaCom, while column G refers to separation of people and groups *within a particular conference*:

Table 4.3: Detailed Comparison of Hall's Social Distances & PortaCom Environments

A	B	C	D	E	F	G
Hall's proxemic social distance	Which PortaCom environment?	1-to-1, 1-to-many, or many-to-many communication?	Can others in communication environment be ignored?	Is a response expected?	Boundaries between in/outside groups?	Is it hierarchical (vs. casual, peer oriented)?
intimate	private letters	1-to-1	not usually	almost always	N/A	usually not
personal	closed conf.	many-to-many	somewhat	sometimes	always	somewhat
social	open conf.	many-to-many	usually	not usually	usually not	usually not
public	read only conf.	1-to-many	N/A	almost never	usually not	always

E. Other Studies of Online Community

While there are numerous studies of various aspects of online communication, I could locate no studies of online environments that proceed from operationalized variables of community. The same problems present in studies of geographic community are also present in the study of online "community" -- the concept "community" is often used but is seldom defined or operationalized. Within the context of online study, the word "community" is often used to signify simply "group process" or to identify a group of people who share a computer-mediated relationship. Hiltz and Turoff's Network Nation (1978), Johansen, Vallee, and Spengler's Electronic Meetings: Technical Alternatives and Social Choices (1979), and, more recently, Sproull and Kiesler's Connections (1991) are seminal with regard to the study of online group process.

Hiltz' Online Communities (1984), the only published research project I could locate that is identified as a study of online "community," is a landmark contribution to the study of online group process. It also clearly highlights the problems associated with the study of online communities mentioned above. Hiltz approaches the subject of her study, a group of

scientists from the same specialty area who are using the New Jersey Institute of Technology's EIES conferencing system, on their own terms. That is, she assumes that such a group must be a community and then identifies the group processes they engage in and characteristics they possess. She then analyzes the processes and characteristics of the group.

The term "community" seems to be the best at present to describe not only many online environments but also many of the new social situations that have developed in the world of modern communication and transportation. However, it is important to distinguish my study from others in that it begins with a conceptualization of "community." Characteristics of community are then identified, and formal methods were used to test for the presence of those characteristics. Theoretically, the conceptualizaion of community I employ should work just as well for a study of geographic community as for a study of online "community."

This study is also different in the sense that "community" is defined in a very full, broad sense, assuming community to be the context of one's personal, social, and professional life. While the EIES group consists of adult, goal-oriented scientists using conferencing largely for organizational and professional purposes, PortaCom consists of a much more heterogeneous, diverse, disorganized population that uses conferencing for a wide variety of personal, social, and professional reasons. In short, PortaCom appears to be qualitatively much like more commonly held experiences of "community," with all the anomolies, diversity, and unpredictability that one would normally associate with such a gathering of people.

5. METHODOLOGY

This chapter is divided into two main sections, reflecting the two broad groups of data collected in this study, qualitative and quantitative.

A. Qualitative Data Collection

The quantitative data collected using the questionnaire described in the next section are the main source of information used in this study. However, a number of sources of qualitative data were very crucial in providing contextual and insider information that helped portray PortaCom as a rich communication and social environment.

Throughout the study, I refer to anecdotal evidence, personal experience, and other forms of qualitative data to support and bring to life the quantitative data that drives this study. A number of sources of qualitative data were used: (a) focus groups, (b) audio journals maintained as a reflection of observation and participant observation, (c) PortaCom letter journal, (d) key informant interviews, and (e) study of documents relevant to PortaCom. Each is described below.

1. Journals and Participant Observation

I have been active on PortaCom from 1990 to the present. The year prior to this study (1990-1991), I maintained an audio journal that was transcribed and committed to paper. During that year I used the audio journal to capture my thoughts and reflections about interaction on PortaCom, as well as UACN email, which encompasses BITNET and Internet. I spent time on PortaCom in a number of capacities. I was, and continue to be, one of three system operators of PortaCom with the power to create and delete conferences, users,

and entries. I was a facilitator, setting up conferences and training others to be organizers and participants. I was an observer-lurker, quietly spelunking in conferences as though they were online caves. I spent a great deal of time as a participant observer, taking part in a number of conferences and engaging in the normal give and take of conference activity. I was an online teacher, organizing and leading conferences in support of my face-to-face courses as well as my online classes. I spent time as a public authority figure as organizer of **Open Forum**, one of the most popular, contentious, and controversial PortaCom conferences. These experiences prepared me for conducting this study by bringing me into intimate contact with all levels of the PortaCom environment.

2. PortaCom Letter Journal

During the year of the study, I created a special private conference called **My Mailbox**; here I stored every private letter I sent during the study period as well as references to letters I received. This method captured unobtrusively my dialogue with others about events and concerns within PortaCom. The letters were reviewed to reconstruct the year of PortaCom events and to provide insight into issues and concepts relevant to the study.

3. Focus Groups

Also during the year prior to the study, two focus groups were held, each with eight people, each lasting about two hours. The groups were demographically diverse. The age range of the participants was from sixteen to late fifties, and the gender distribution was about even. Occupations of those involved included university and high school students, the PortaCom system operator, business people, state workers, independent contractors, and university, elementary school, and correspondence school teachers. Six of the participants were conference organizers, with positions of responsibility in

PortaCom, while ten were regular participants without organizer responsibility. I knew some of the participants to be casual users of PortaCom, but for the most part they were people generally recognized to have more than just a casual presence on PortaCom. Discussion centered on two basic questions that I posed to the focus groups: 1) Why do you use the online medium, and PortaCom in particular? and 2) What are the main issues that face PortaCom as a user group?

4. Key Informant Interviews

One person, Michael Ciri, was responsible for the installation and running of PortaCom during its first three years. I conducted eight hours of interviews with Ciri about PortaCom, its history, problems, and prospects from user, technical, and administrative perspectives.

5. Documents

The following documents were consulted in this study:

a. UAS demographic data document. This was used to compare PortaCom user demographic data with general UAS demographic data.

b. PortaCom manuals. A user's guide and an administrator's guide provided information about how the PortaCom environment was structured as well as the command set used to maneuver within PortaCom.

c. Justification of the creation of **Gay and Lesbian Forum**. This short document, prepared by a student to defray possible community concern, articulated why such a conference should be allowed on the PortaCom system. It is important because it deals directly with the issues of freedom of speech, censorship, community responsibility, and social norms that re-occur in PortaCom on a regular basis.

d. **Open Forum** Study. The results of a questionnaire posted to **Open Forum** to glean user preferences about the direction of the conference and particularly about highly contentious issues such as online behavior and

freedom of speech.

B. Operationalizing the Characteristics of Community: Quantitative Data Collection

1. System Information

System information was used to measure the following two characteristics of solidary community, which were identified in Chapter 3:

1. self-containment
2. non-transience

System-wide as well as individual conference data that depict the kinds and levels of PortaCom activity were collected on a daily basis. Information collected includes the total number of registered and active PortaCom users, system-wide and individual conference messaging activity, total number of times PortaCom was used, and the total time spent on PortaCom. System data was then used to track fluctuations in population and conferencing activity during the period of the study.

2. The Questionnaire Instrument

a. Determination of Project Participants

The same system information referred to in the preceding section was used to identify the most active users of PortaCom during the period 9/12/91 - 3/24/92, approximately one month before the school year ended. The last month of the school year was used to perform the system data analysis, contact potential questionnaire recipients, and mail out questionnaires before the academic year ended and the respondents dispersed for the summer.

An initial pool of 137 potential respondents was identified. Of these, 105 agreed to fill out the questionnaire. Of the 105 questionnaires sent out, 83 were returned, for a total return percentage of 79%. As an incentive to fill out the questionnaire, each participant was promised access to the final report and one Russian ruble.

b. Questionnaire Administration, Collection, and Verification

The questionnaire was sent out using regular surface mail, with return envelopes provided. Data was stored on UAS's VAX 8600 so that Statistical Package for the Social Sciences (SPSS) software could be used for analysis. Once the data was in final form on the VAX, I compared it with the original questionnaires as a final data validity check. With the help of an assistant, I compared each of the 30,000 pieces of data and corrected the few discrepancies that were uncovered. The data were also transferred to a Macintosh, verified again, and subjected to spreadsheet analysis.

c. Questionnaire Field Testing

The questionnaire (Appendix I) was field tested with the eleven students of my Educational Telecommunications class. Each student was asked to fill out the questionnaire, note the time at the end of each section of the questionnaire (in order to get an idea of how much time it took to complete each section), and note anything that was confusing or unclear. Following the field test, I conducted a debriefing session with field test students and UAS sociology instructor Alan Lamb. This input, as well as input from dissertation chair Dr. William Richards provided during the evolution of the questionnaire, was used to make modifications. The final version of the questionnaire appears in Appendix I.

d. Questionnaire Length

It should be noted that the questionnaire was very long, requiring usually more than an hour and sometimes up to two hours to complete. The combination of the in-depth questionnaire and qualitative information provided a rich data set for this project.

e. Overview of Questionnaire Content and Structure

The questionnaire consists of five sections:

1) Section 1 - Basic Information.

This section covers demographics, personal information, and online activities and habits. Some characteristics of solidary community are addressed in this section, including social homogeneity and spatial boundedness.

2) Section 2 - Close Friends.

Respondents are asked how the following channels of communication are used in interacting with close friends: telephone, in-person meetings, PortaCom, other online services (that is, online services other than PortaCom), written correspondence, and "other" as defined by the respondent. One characteristic of the personal network approach to community, maintenance of close friendships, is addressed in this section.

3) Section 3 - Categories of Interaction.

This section covers many of the characteristics of personal networks. Respondents are asked how the following channels of communication are used with six sets of categories of interaction and activities: telephone, in-person meetings, PortaCom, other online services, written correspondence, and "other" as defined by the respondent. The six sets of categories are explained later in this chapter.

4) Section 4 - Finding Information and Miscellaneous Considerations.

Respondents are asked how and where they find information, what kinds of social activities they engage in on a regular basis, and what PortaCom issues are important to them. One characteristic of the neighborhood model, the importance of social activities, is covered in this section. In addition, one characteristic of the personal network approach to community, acquisition of information for both professional and social purposes, is also addressed.

5) Section 5 - Attachment to PortaCom.

The characteristics of the neighborhood community model are addressed in this section, including a shared sense of PortaCom group identity, attachment and loyalty to PortaCom, and issues of common concern to PortaCom users.

The rest of this chapter describes how each section of the questionnaire addresses the characteristics of community identified in Chapter 3.

f. Detailed Description of Questionnaire.

1) Questionnaire Section 1 -- Basic Information.

This section provides the overview that gives context to the information collected in the following sections. This section gathered standard kinds of data often collected in sociological studies, such as age, gender, income level, educational level, marital status, and political leanings, in a multiple choice format. In addition, the questionnaire asked respondents for information about their online activities, including questions about when and why they use online media in general and PortaCom in particular, how much time they spend on PortaCom and other online services, how often they interact on PortaCom and other online services, whether they had home and/or work online access, and what their favorite PortaCom conferences are. Two characteristics of solidary community are addressed in this section: social homogeneity and spatial boundedness.

b) Questionnaire Section 2 -- Close Friends.

Section 2 is concerned with relationships with one particular kind of personal tie that addresses one characteristic of personal networks: close friendships. To encourage respondents to discuss relationships with close friends without compromising confidentiality, the questionnaire provided the following work sheet at the beginning of the section:

Figure 5.1: Questionnaire Excerpt #1

Please tear this sheet out of the questionnaire. It is not be turned in and is only meant to be used for your reference.

Think for a minute about those people you feel especially close to, in other words, those people whom you would probably refer to as your **close friends**. Now, in the blanks below write their names or initials. Again, **this will not be turned in** with the questionnaire. This is done only for your reference. I have provided blanks for up to 8 close friends. You are not expected to fill in each one, just as many as pertain to you. That is, if you feel only 3 people in your life qualify as close friends, then only fill in three of the blanks.

1. Close Friend # 1 _____

2. Close Friend # 2 _____

3. Close Friend # 3 _____

4. Close Friend # 4 _____

5. Close Friend # 5 _____

6. Close Friend # 6 _____

7. Close Friend # 7 _____

8. Close Friend # 8 _____

Respondents were then asked to rate the importance of different ways of interacting with others in the maintenance of close personal relationships: telephone, in-person encounters, PortaCom, other online services, written correspondence, and "other" as to be specified by the respondent. Eight questions were asked about each close friend using the following format:

Figure 5.2: Questionnaire Excerpt #2

You circle the number that represents your answer ===>>>	Not at all important	Somewhat important	Important	Very important	Extremely important	Don't know
	1	2	3	4	5	0
1. Close Friend #1 During this school year, how important to you have the following been as a means of interacting with this friend:						
a. telephone:	1	2	3	4	5	0
b. speaking, interacting in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0
g. Did you meet this friend through PortaCom? Please circle one: YES NO						
h. Did you meet this friend through an online service other than PortaCom? Please circle one: YES NO						

The last two questions are of particular importance. Whereas parts (a) through (f) deal primarily with how close friendships were maintained, parts (g) and (h) ask whether the online medium was used to create new close friendships and thus extend one's network of close friends purely online. This provides valuable information about one set of categories of interaction addressed in this project: new relationships.

As the question format used in Section 2 is very similar to the one used in Section 3, and as Sections 2 and 3 comprise the bulk of the questionnaire, it is instructive at this point to discuss the approach used in these sections.

Despite the fact that the focus of this study is primarily "PortaCom as

community," I felt that respondents needed to be asked how important all channels of communication were so that respondents could think in more holistic terms. That is, asking only "How important is PortaCom in maintaining a close friendship?" does not provide the context or opportunity for holistic thinking as does asking how important all channels of communication are in this regard. Thus the questions in Sections 2 and 3 ask respondents to provide input about the importance of all the primary channels of communication that can be used to maintain the relationships that comprise one's community. The fact that the "other" category was very seldom used suggests that the list of interaction forms was exhaustive or very nearly so. Even though the research questions that drove this study concern PortaCom, an interesting by-product of this questionnaire design is the body of data it elicited about all forms of interaction in the lives of the respondents.

c) Questionnaire Section 3 - Maintaining Different Kinds of Personal Relationships and Engaging in Different Kinds of Activities

Respondents were asked about different categories of interaction and activities related to their personal networks. The questions in this section measure the following characteristics of personal networks which were identified in Chapter 3:

1. Engaging in a wide variety of relationships. This area was further broken down into the following six categories of interaction:

   A. Set #1: Socially Defined Categories of Interaction

      1) Family and/or relatives

      2) Co-workers

      3) Acquaintances

      4) Those who share a similar hobby or interest

      5) Colleagues or peers in your field

   B. Set #2: Individually Defined Categories of Interaction

      1) Those you feel especially close to

2) Those you like to spend a lot of time with

3) Those who have an ongoing presence in your life

4) Those you consider particularly influential in your life

5) Those you argue with

C. Set #3: New Relationships

1) Meeting new people

2) Making new friends

D. Set #4: Education-related Categories of Interaction

1) Teachers interacting with students

2) Students interacting with teachers

3) Students interacting with other students

E. Set #5: Emotional Help

1) Giving on-going emotional help on an ongoing basis

2) Receiving on-going emotional help on an ongoing basis

3) Giving emotional help in a crisis situation

4) Receiving emotional help in a crisis situation

F. Set #6: Help with Offline Tasks

1) Giving help with small tasks

2) Receiving help with small tasks

Because I was seeking a large amount of information, a goal of the questionnaire design was to make the format as consistent as possible. The format of each of the questions within this section is identical and, as mentioned earlier, nearly identical with the format used in the previous section. The importance scale and media selection used in Section 2 is used in this section, with only a small modification. Section 3 deals with a group of people, rather than individuals, and therefore cannot ask questions (g) and (h) found in Section 2, which deal with individuals.

To encourage comfort with the format and preserve the flow of filling out the questionnaire, respondents were told at the outset of this section about

the similarities in format. Question #1, Section 3 is provided below as an example of the format:

Figure 5.3: Questionnaire Excerpt #3

You circle the number that represents your answer ===>>>	Not at all important 1	Somewhat important 2	Important 3	Very important 4	Extremely important 5	Don't know 0
1. During this school year, how important to you have the following been as a means of interacting with **family and/or relatives**:						
a. telephone:	1	2	3	4	5	0
b. speaking, interacting in-person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0

d) Finding Information and Miscellaneous Considerations

This section addresses the following characteristics of personal networks: acquisition of information for both professional and social purposes. Questions 1 and 2 ask the respondent to rate the importance of different kinds of media and experience as information resources. A distinction is made between finding information to enhance one's professional and educational life (Question 1) and one's social and personal life (Question 2). This separation was made because information obtained from focus groups and extensive experience in PortaCom suggested that this distinction was important to PortaCom participants.

This section also addresses the following characteristics of

neighborhoods:

1) The presence of issues of common concern

2) PortaCom as an important social group

Respondents were asked to rate the importance of different kinds of activities and associations, one of which was PortaCom. From their responses can be gleaned the comparative importance of PortaCom with other typical community activities. Questions 6 and 7 address this attitude a bit differently. Question 6 asks the respondent to rate the importance of PortaCom in facilitating certain kinds of tasks and associations. Question 7 asks the same about online services other than PortaCom. While Question 7 does not directly address the question of "PortaCom as community," it provides interesting information about the online world in more general terms. Question 8 asks respondents to rate the importance of eleven issues related specifically to PortaCom as a social experience. The issues were derived from focus groups and other sources of qualitative data.

e) Questionnaire Section 5 - Attachment to, Identification with, and Membership of One's Community

This section measures the following characteristic of the neighborhood model identified Chapter 3: shared sense of group attachment, identity, and membership. In particular, this section asks respondents to react to more visceral kinds of issues that relate to their sense of attachment to and identification with PortaCom as a social group. In addition, it asks whether there exists an insider versus outsider relationship between those who use PortaCom and those who do not. Respondents are also asked to react to a series of statements about PortaCom that relate to their willingness to defend PortaCom against very real threats, such as administrative defunding, control of behavior and/or prioritization of PortaCom resources, and activities from outside PortaCom.

6. THE HISTORY AND EVOLUTION OF PORTACOM AT UAS

This chapter presents the results of the qualitative data analysis. The purpose of this chapter is to provide the reader with a history of the evolution of the PortaCom system at the University of Alaska Southeast, focusing on the problems and opportunities users encountered as they struggled to develop an online social system. In addition, this chapter will provide an idea of how and why PortaCom is used and how users perceive their relationship with the PortaCom system and user group. Information presented in this chapter will be helpful in discussing one of the characteristics of solidary community: rules and customs based on tradition and ascribed order rather than rationality and achieved order.

There are a number of theoretical approaches to community, each with its own body of literature, language, and constructs. While the approach used in this study was the network approach, it seems fitting to introduce this section of the thesis with a short description of another approach called by various names, including interpretive, social psychological (Stoneall), and symbolic (Cohen).

In the interpretive approach, "community" is viewed on an individual rather than a macro level. Individuals are seen as the components of the larger reality of a community, and it is in understanding how they communicate with one another and how their interactions shape the nature of the larger social group to which they belong that we understand the essence of their community. Through their interactions with one another, members of a community create their own social reality. Subjective meaning is attached to behavior, common symbols are developed, and social reality is developed as a

result of mutually achieved meanings. In this process, "labeling" is used to identify and symbolize certain behaviors, particularly those that appear to fall outside what would commonly be considered behavioral norms.

Cohen puts it well. In distinguishing the symbolic approach from other approaches, he talks about its difference in vantage point and methodology:

> ...We try to understand community by seeking to capture its members' experience of it. Instead of asking, "What does it look like to us? What are its theoretical implications?," we ask "What does it appear to mean to its members?" Rather than describing analytically the form of the structure from an external vantage point, we are attempting to penetrate the structure, to look *outwards* from its core (Cohen, p.20).

Of particular importance to the study of potential online communities is a subset of the interpretive approach called the dramaturgical approach, popularized by Goffman's work, **The Presentation of Self in Everyday Life** (1959). The dramaturgical approach studies how community members present themselves and purposefully manipulate events and interaction in the process of their presentation. It is called the dramaturgical approach because it uses the language and perspective of theater to understand the behaviors of community members (Stoneall, p.176).

The qualitative data collected for this study were used primarily as background for the more formal research efforts undertaken in this project. Research that focuses on the interpretive perspective would look directly at conference content, which is beyond the scope and purpose of this study. However, in reading the following summary, it is easy to discern the dramaturgical and interpretive process at work and the process utilized by PortaCom users to develop and define their own unique kind of social gathering.

A. Historical Perspective of PortaCom

Of the many sources of qualitative data that were collected, the key informant interviews with Michael Ciri were one of the most revealing in terms of explaining how PortaCom has evolved as a social environment. What follows is a historical perspective of PortaCom based largely upon those interviews and, to a lesser extent, on other sources of qualitative information described in the methodology chapter. This perspective helps provide not only a sense of PortaCom's past and evolution but also a feeling of the tone and nature of PortaCom that will be helpful later on in discussing questionnaire results.

Ciri was responsible for the installation, maintenance, and stewardship of PortaCom during its first three years. During that time, he played the roles of chief technician, system administrator, disciplinarian, and original organizer of **Open Forum**, the largest and most controversial conference within PortaCom. PortaCom was originally installed at the Fairbanks campus of the University of Alaska, where it became the brunt of many jokes as the softer end of computing that no one else wanted. PortaCom was transferred to the Juneau campus (UAS) in 1988 where it was installed on a VAX 8800. A number of problems with PortaCom, primarily data base malfunctions that erased conferences and conference messages, plagued PortaCom until 1989. Since 1989, it has been running smoothly.

From its inception, Ciri viewed PortaCom as a virtual "community" (his word). He saw his stewardship of PortaCom as an attempt to develop a kind of online utopia in which people would aspire to greater heights of intellectual accomplishment and social action than possible in the offline world. He talked about his desire to facilitate the components of community creation and maintenance, such as acculturation of newcomers to the ways, norms, and beliefs of the PortaCom community, and sponsoring community activities to develop a PortaCom "society." The first conferences he established were **PortaCom Etiquette**, which was designed to address issues of appropriate

PortaCom behavior and the establishment of behavioral norms, and a number of general interest conferences about topics such as comic books and movies.

With prompting from UAS staff, Ciri established an open-ended, topic-less conference that was first called **Free For All**. He hoped participants would use **Free For All** as a primary vehicle to develop the online society he envisioned. Ciri was immediately appalled and disillusioned by what he witnessed. First, **Free For All** attracted users who wanted to abuse each other verbally, often called "flaming" in online vernacular (Sproull and Kiesler, 1991), and who dominated the conference for that purpose. Although he had meant the title to mean "free for everyone to partake in," it had been interpreted as "no holds barred brawling." Second, even though he appealed to participants to maintain a sense of decorum, he was often tersely told that in doing so he was interfering with their freedom of speech. He found that when he tried to exercise his authority as system operator -- a role he hoped he would not have to use in the new online society -- it was not respected. Instead, it appeared to Ciri that some of the most influential PortaCom citizens had interpreted it as a place in which they were free to regress.

Ciri acknowledged that many other conferences, though not as popular and visible as **Free For All**, were successful in that they were self-policing and maintaining. But almost all interview time was spent talking about **Free For All** and other open-ended conferences with which PortaCom largely became associated. The issues of censorship, control, and online behavior that continue to this day as some of the most important issues concerning PortaCom began with this conference.

Ciri changed the name of the conference **Free For All** to **Open Forum**; however, this change was only marginally helpful. The most vociferous users continued to dominate and set the tone for the rest of the conference. At one point Ciri remarked that visiting **Open Forum** was like walking in an unsafe neighborhood in the new online society. He began receiving many private

PortaCom letters that complained about the tyranny of a few.

Because the online environment was so new and had not generated its own jargon and vocabulary to any great extent, people spoke about it in metaphors. Ciri would ask one of the troublesome participants something like, "Would you yell at someone in a classroom or at a town meeting the way you are here?" and s/he would respond with "This isn't a classroom or a town meeting -- this is a bar!" He would appeal to those he came to call "online terrorists" with something like, "This isn't fair to the rest of the people in this conference who don't approve of your behavior," to which they would respond with "We don't tell THEM how to behave."

Ciri came to see the situation as a battle of competing freedoms. Both sides of the issue sought refuge in the U.S. Constitution. Those who wanted to "flame" maintained they had a First Amendment right of free speech to express themselves as argumentatively as they wished. Those who did not want to be subjected to a hostile environment maintained that their right to peaceful assembly, free from intimidation, was being violated. Ciri came to appreciate that the debate about the freedom of speech was an endless dialectic. For every argument there was always a counter argument, a dynamic that is only amplified online in the absence of visible authority.

While there were many who encouraged total freedom or censorship, most were caught in the middle. As organizer of **Open Forum** later on, I asked participants to respond to a questionnaire about freedom of speech, hoping to break the stalemate that had developed in two years of haranguing about the issue. Besides the few who were clearly on one side of the issue or the other, most were as reluctant to encourage censorship as they were to discourage it.

In reaction to the situation, four developments took place that are still in place today and which, to a large degree, still define and guide overall PortaCom behavior and socialization. First, private protected

(unpublicized) conferences were created by people who wanted a safe place to converse. They still function today as private, invisible clubs with a very restricted membership in which people can engage, in Hall's terms, in intimate and private communication without fear of outsider reprisal.

Second, closed, publicized conferences were created to deal specifically with issues that arose in **Open Forum** and that people wanted to pursue in earnest, using some rules of debate. Membership to these conferences was limited by organizers to those who agreed to respect certain behavioral rules.

Third, in 1990, Ciri established **BloodBath**, a conference for those who wanted the freedom or who felt the need to denigrate each other verbally in public. With the presence of such a venue, Ciri declared he would begin removing people from other conferences if their behavior warranted it. In Hall's terms, such a conference was a social and, in some ways, public forum that was dominated by a few people and in which the rest just listened, permitted to speak but afraid or uninspired.

Fourth, Ciri began to enforce the first real set of informal behavioral rules. There were three rules and one recommendation. First, no personal attacks were permitted. Anyone could attack an idea but not the person with the idea. Second, users could not say anything they wanted anywhere they wanted to. They needed to go into **BloodBath** or a conference of their own creation where they could conduct themselves as they wished. And third, swearing was not permitted. In addition, Ciri recommended that those wanting different kinds of online experiences join conferences available through the Internet, BITNET and UseNet, some of which would make **Open Forum** appear tame by comparison. Ciri's intention was to make PortaCom a place for, as he called it, "high brow debate rather than adolescent bashing."

BloodBath was short lived but very interesting. First populated primarily by high schools students, it was known at the time as a "scream and swear fest." Those of us with an interest in social science research joined

BloodBath as lurkers to watch what would happen when people were permitted complete freedom of expression. As swearing and screaming subsided, participants began to engage in meta-conversation about **BloodBath**. They explored the nature of free speech and the irony of the fact that rules were needed to ensure freedom, an issue that surfaced often in **Open Forum** as well. **BloodBath** was short lived because of the concern of parents and other community members. UAS administration talked about adopting rules or even needing to shut down PortaCom completely because of the legal liabilities presented by providing high school access to adult conversation. A month after **BloodBath** was created, it was discontinued.

Since then, a number of conferences have come and gone, covering over a hundred topics, from parenting to classified ads, from astrology to etymology, from sex to religion. While important, very few of these attract negative public attention and thus were little more than a footnote in the interviews with Ciri. Even as late as last year, when questionnaire respondents in this study were asked which conferences were most important to them, the overwhelming winner was **Open Forum**. As an example of the variety of conferences supported by PortaCom, a list of all the conferences present on PortaCom as of March, 1992 is presented in Appendix 3.

Because of the behavioral latitude implicit in the way PortaCom is interpreted at UAS, user activity quickly spread into every level of Hall's social communication. Because **Free For All**, a social conference in Hall's terminology, did not meet everyone's needs, users utilized intimate communication (letters) to complain to the system manager and to each other. These complaints ultimately led to the establishment of private (closed) conferences and at least one public (read only) conference. One of the few read only conferences ever established in PortaCom began as an open conference on the topic of Islam. Because the organizer found himself continually under attack, he changed the status of the conference to read only. The change

allowed him to expatiate without having to worry about negative feedback.

This brief history of PortaCom emphasizes a crucial point. PortaCom is a conferencing environment that has largely been allowed to define itself and evolve with few limitations or expectations. This is not true for all conferencing systems. For example, the issues that dominated Ciri's interview rarely surface in Hiltz' study of the EIES system in Online Communities because there were already a number of behavioral and norm expectations assumed in the older, professional group of people she studied. Many of the computer conferencing applications in business, scientific, and professional environments are often used as sophisticated Post-It-Note®, idea-generating, and product-collaboration systems, as EIES was in this situation, rather than the more amorphous, self-defining system that PortaCom was and continues to be.

The point for researchers is this: Involvement in PortaCom may leave one more frustrated than involvement in more narrowly defined conferencing environments, but it also leaves one with a sense that s/he is closer to "real" community and unhindered social evolution, with all the benefits and detriments assumed by such evolution. In addition, PortaCom is certainly much richer experientially and, for those of us studying online "community," potentially much more interesting than a controlled, homogeneous environment.

B. The Other Side of Online Freedom

The other side of online freedom is safety, the feeling among users that it is safe to communicate with people online in ways that they might not feel safe communicating face-to-face or using other forms of communication (Sproull and Kiesler, Hilt and Turoff, 1978). I noted this side of freedom frequently in my journals, and it provides a positive perspective, and thus some balance, to the picture of PortaCom presented in the previous section. A few examples of this side of freedom follow. The names are changed to preserve anonymity.

The first example was particularly dramatic because I knew the students involved both through PortaCom (and to a lesser extent through email) and on a face-to-face basis. Students who said little in class, for a number of often cited socio-emotional reasons (Harasim, 1989, Kiesler, Siegel, and McGuire, 1984), came to life in PortaCom. The following entry from my journal captures my sense of amazement at this phenomenon:

> ...[Three]...people who went almost catatonic about making a presentation in ED 432 [a face-to-face course about educational telecommunications] were [three] of the most active online. (p. 7)

One of these students, who was the most reticent face-to-face student I have ever worked with, actually became organizer of **Open Forum** during one of its stormier periods, and managed it successfully for one year.

Note that the reason for feeling safe is not, as is often popularly conceived, anonymity. These three students knew and saw their classmates at least once a week in a face-to-face class yet still managed to use the lack of face-to-face contact online to encourage the ability to communicate. The three students referenced here were also consistently the least vocal in general classroom discussion. It is interesting to note that all three students remarked that their positive experiences online helped them to overcome their shyness on a face-to-face basis, a comment I also received from high school teachers monitoring a high school email project.

Another entry from my journal suggesting a different use of the safety of the online environment concerned a high school teacher who was communicating via email with a student who was sick at home:

> Bob [the teacher] had an interesting thought today. He's communicating with one of his [biology] students [via email]...and he got a message from that student today [via email] who was home

> sick....[Bob] said it was one of the best things that's ever come out of...[the student's]...mouth....It does make one consider what happens when you throw people into a space where they're more, presumably, comfortable or at least a space they have more control over, that they have personalized more than a classroom (p. 11).

Bob was so impressed with this turn of events that he began an online relationship with the student's mother to talk about her son's progress. It is interesting to note that Bob perceived the student's statement to come from "the student's mouth." That is, Bob perceived his relationship with the student to be part of a verbal dialogue rather than a written exchange.

Freedom through safety is experienced in another way in that some users are simply more apt to talk about important subjects, particularly intimate subjects, than they would in other venues. According to questionnaire results, tied for second place as the most favorite PortaCom conference is the private conference **Questions about Love and Sex,** in which the organizer introduces questions for participants to discuss. Examples of typical questions are listed below:

1. Do you think about someone else when you are making love with your spouse or significant other?

2. If your next child would be an exact genetic clone of either you or your partner, which would you prefer? Why?

3. What is the greatest number of sexual partners you have had in one week? In one year?

4. In what ways would you like to have a greater sense of either togetherness or independence in your relationship? How do you think your partner feels about this?

5. If your partner were gone for two months, which things that he or she takes care of would be a real problem for you? Do you and your partner make lifestyle choices specifically designed to set up or

to reduce day-to-day dependencies?

The questions are highly personal, asking conferees to reveal some of the most personal aspects of their behavior with a group of people, some of whom they know only online. I think it is fair to say that these subjects are usually reserved for highly safe offline environments, such as support groups or discussions with close, personal friends. Yet **Love and Sex** participants engage in extremely revealing dialogue not even knowing who is "listening." Entry into this closed conference is not difficult. One simply needs to convince the organizer that s/he is over nineteen and serious about the subject matter. My experience with this conference indicated that many members "lurked," saying little or nothing.

Of all the behaviors that were cultivated by the safety of the online environment, one seemed to be particularly new or at least amplified in online space: communication across social boundaries. Kiesler, Siegel, and McGuire describe the quality of the conferencing software that enables this behavior:

> Software for electronic communication is blind with respect to the vertical hierarchy in social relationships and organizations (1984, p. 1125).

This phenomenon is usually cited with respect to business organizations. Traditional hierarchical chains of command are yielding to adhocracies which re-combine the skills and resources within an organization on an as-needed basis. This re-combination is done without regard to traditional hierarchy, in order to address an ever-changing array of problems and opportunities (Malone and Rockart, 1991).

This phenomenon is particularly interesting in a broader social context, like PortaCom. I came to call it "interlational communication," which I define as "communicating across social boundaries within a particular culture." In crossing social boundaries, the roles normally implicit in a social situation that guide behavior and articulate relationships blur or

become irrelevant. A blurring of teacher-student roles is captured in the following entry from my journal:

> I've just come out of [the conference] **BloodBath** and there was Louie Preston, a [high school] teacher, interacting with a bunch of high school students that have come to dominate **BloodBath**, by saying girl friends are like farts -- every once in awhile you have to let one go. I dare say Louie would not talk like that normally, or those students would be afraid of it. There are two points here. One, [Louie] feels safer about doing it, because of the medium. Two, the medium is actually less safe, because there's actually a record of it (p. 12).

The following entry from my journal views this situation more from the student perspective:

> Absolutely fascinating. I am in the **BloodBath** conference And it has fascinated me that we have some real interlational communication going on here, because we have Louie Preston, a teacher, talking to Gary Smith, who is an 11th grader at the high school. It's fascinating that the two of them would hop into, of all places, **BloodBath**. But also I am looking at Gary Smith's message, 35581, in which he says -- he is commenting on something [derogatory] that Enrique Lewis [another high school student in **BloodBath**] said [to Mr. Preston] -- [in which Gary says] "are you going to take that kind of abuse, Mr. Preston? Hey I can call you Louie now, can't I?"... so there is the implication that in this medium he can call him Louie, instead of Mr. Preston (p. 15).

A later discussion with Gary Smith confirmed that he was speaking to Mr. Preston in ways he would never consider in any other venue. The implications for a study of community are quite profound. If community relationships are largely role-based and if the online venue alters the nature of roles and

communication among those in different social strata, how does the online environment impact the nature of the community?

C. Summary Of Qualitative Data

The series of points that follow help summarize the data presented above, as well as other qualitative data considered in this study. Some of these points are PortaCom-specific, while others pertain to CMC generally.

1. The freedom implicit in online communication can bring out the best and the worst in people. On the positive side, the asynchronicity and lack of meta-information (such as eye contact, body language, and voice inflection) can encourage communication by those who are normally inhibited or excluded in face-to-face or audio environments for a number of reasons, including self-consciousness about appearance or speaking ability, lack of assertiveness, or crosscultural differences. On the negative side, the asynchronicity and lack of meta-information allows argumentative, hurtful, or anti-social behavior without having to face directly the dismay or hurt caused by arguing or flaming. In its most positive light, flaming can be construed as simple misunderstanding because of the lack of meta-information, rather than a deliberately hurtful act.

2. The lack of meta-information and the restructuring of meeting space in an electronic space dilute common cultural reference points, allowing interlational communication (communication across social roles) to occur.

3. Online environments differ in terms of flavor, tone, structure, and social objectives, both within and among conferencing systems. Three major variables that shape the nature of an online environment are as follows:

a. The degree of freedom and the nature of the purpose that informs its charter.

b. Commonly accepted social norms and expectations of the user group.

c. The flexibility allowed by the software in terms of the different

kinds of communication dynamics the software allows.

PortaCom at UAS can be viewed as relatively open and free, though not as open and free as some environments, like UseNet, in which literally "anything goes." PortaCom is fairly flexible in terms of accommodating a number of different ways of gathering and communicating online.

4. In the PortaCom environment, the issues of freedom of speech, thought, and behavior dominate open-ended conferencing. Much of this discussion is divisive and often accompanied by a meta-conversation about the nature of freedom and freedom of speech, and the cultural limitations and community expectations that define freedom.

5. It is possible for one individual, pair of people, or small group to dominate a conference entirely, essentially driving others into spectator status or into safer environments, such as closed conferences. Obsession with such an event can permeate the conferencing environment.

6. While PortaCom is largely identified by a few controversial conferences or individuals, there are a great number of conferences that are highly successful and that attract little outside attention.

7. Because conferences can have overlapping purposes, it is hard to develop strict definitions of "types" of conferences. However, extensive experience in PortaCom suggests that PortaCom conferences fall into three basic categories, each with two sub-categories. An entire listing of conferences appears in Appendix 3. A summary of conferences by type as of March 1992, follows:

Table 6.1: Summary of Conferences by General Conference Type

1. Academic/institutional	
Type A - Educational/instructional, research, administrative	38
Type B - Academically/student project related	29
2. Technical	
Type C - General technical help	11
Type D - PortaCom related- tech, administrative, general info	6
3. Social	
Type E - Student service, general discussion, non-game related	19
Type F - Games or game-related	4
Total number of conferences, as of March, 1992:	107

8. PortaCom appears to encourage community in Hall's terms in that it embodies the four levels of social interaction in interconnected and meaningful ways.

9. PortaCom appears to encourage components of both community as neighborhood by providing a "place" for groups to congregate and community as network by facilitating the extension of one's personal network in order to meet personal needs. The questionnaire data will help determine to what degree these are realized.

7. PORTACOM ACTIVITY - SYSTEM DATA

The purpose of this chapter is to present the findings of the system data collected during the period of study. These findings suggest the kinds and levels of user activity that occurred during the study, including overall PortaCom usage patterns. Information presented in this chapter will be helpful in discussing two characteristics of solidary community: self-containment and non-transience.

The study of PortaCom is facilitated by the fact that PortaCom generates system data about user and conference activity. The following data were collected on a daily basis:

1. Registered users. The total number of people who had valid PortaCom IDs as of that day. It is also called "registered membership."

2. Active users. The total number of different users who signed on to PortaCom at least once that day.

3. Sessions. The total number of PortaCom sign-ons that day. This is different from total number of active users in that total sessions includes all sign-ons, including multiple sign-ons by individuals.

4. Time spent in PortaCom. The total amount of time spent by all users who were on PortaCom that day.

5. Entries written. The total number of personals, notices, comments, presentations, and letters written that day.

6. Entries read. The total number of personals, notices, comments, presentations, and letters read that day.

This data are presented from three perspectives: (a) user membership and presence, (b) messaging activity, (c) time online and session data, and (d) conference activity.

A. User Membership and Presence

PortaCom is a fairly fluid environment, with a user base that varied throughout the study. At the beginning of the study there were 346 registered members; at the end there were 570. The greatest daily increase in membership registration was 16, the greatest decrease was 79. The number of people active on PortaCom on a daily basis ran from a low of 6 to a high of 113. During the period of study the number of public conferences varied from 48 to 61; the number of private conferences varied from 22 to 41.

Daily user activity serves as a good indication of overall PortaCom activity. The following table summarizes the user data collected each day during the study:

Table 7.1: Summary, Daily User Activity

Number of days in study	Number of members active on PortaCom that many days	Percent	Cumulative Percent
1 - 5 days	199	38	38
6 - 10 days	65	13	51
11 - 15 days	36	7	58
16 - 20 days	20	4	62
21 - 25 days	28	5	67
26 - 50 days	64	12	79
51 - 100 days	54	10	89
101 - 150 days	26	5	94
151 - 200 days	18	4	98
201 - 245 days	10	2	100
Total	520 registered members	100%	

As an example, line 1 of this table reads: 199 people (38% of all registered members) were on PortaCom between 1 and 5 of the 245 days of the study.

The relative inactivity of many registered members is immediately apparent, a fact that the following table helps to make clear:

Table 7.2: Summary, User vs. Registered Member Activity

	Daily Mean
Active users	74
Registered members	526
Active users/registered members	14%

As the table shows, on the average, only 74 of the 526 registered members (14%) were active on a daily basis.

Even though 224 people joined PortaCom during the study, and were thus limited in the number of days they could be active, far fewer members were active than might be expected. Well over one third (38%) of registered members were active only 1 - 5 days (approximately 2% of the study period), two thirds (67%) were active on PortaCom only 25 or fewer days (10% of the study period), and well over three quarters (79%) were on PortaCom only 50 or fewer days (21% of the study period). Conversely, less than 6% were on PortaCom 151 days (62% of the study days) or more.

It is possible that 14% represents a steady state of user activity. But to add perspective to the issue of user participation, I adjusted my sense of "activity" and made the assumption that someone who "checked in" on a weekly basis could still be considered active. As the study was conducted over 35 weeks, a user might be consistently "active" who had only been on PortaCom 35 days, if each day were in a different week. To investigate weekly activity, I developed a data table from the daily user activity data. A user was deemed active during a week if s/he was on PortaCom at least once during that week. The table below summarizes the weekly activity:

Table 7.3: Summary, Weekly User Activity

Number of weeks	Number active at least once/weekly for that many weeks	Percentage	Cumulative Percentage
1-5 weeks	244	47	47
6-10 weeks	76	15	62
11-15 weeks	66	13	75
16-20 weeks	27	5	80
21-25 weeks	19	4	84
26-30 weeks	33	6	90
31-35 weeks	53	10	100
Total	520	100%	

As an example, line 1 of this table reads: 244 people (47% of all registered members) signed on to PortaCom at least once a week during 1 to 5 weeks.

Users do seem somewhat more active when considered from a "weekly" point of view. Nearly one quarter of registered members were on PortaCom during half of the weeks, versus about 10% who were on half of the days. However, in other respects, weekly activity basically reflects daily activity, with a high concentration of inactive users and a small number of very active users.

Extensive experience on PortaCom suggests reasons why there are so many more registered than active users. Members of the university community, hearing rumors about PortaCom and induced by the fact that PortaCom is a free service, became PortaCom members with no compelling reason to do so other than curiosity. The lack of a compelling reason, coupled with other factors such as the lack of training and/or a lack of interest in the online environment, led to a number of inactive PortaCom members. Although the PortaCom system operator has the option of deleting users after three months of inactivity, the user data base can accommodate approximately 750 members. PortaCom never had that many members and there was little incentive to delete the inactive users. Thus, many PortaCom "members" remained registered, though inactive.

B. Messaging Activity

Messaging information is presented in two ways: mean total messaging activity and mean daily individual messaging activity. The following table presents the total number of messages sent and read, as well as daily, weekly, and monthly means:

Table 7.4: Summary, Total Messaging Activity

	Daily Mean	Weekly Mean	Monthly Mean	Total, Study period (245 days)
Messages sent	162	1,135	4,862	39,706
Messages read	4,756	33,426	143,260	1,169,922
Messages read/sent	30-to-1	30-to-1	30-to-1	30-to-1

"Messages read/sent" is the ratio of the number of messages sent to those read. Thus, on average, there were 30 messages read to every 1 message sent.

Individual messaging activity is derived by dividing the mean number of daily users by the mean number of daily messages sent and read. The following table summarizes this information:

Table 7.5: Summary, Individual Messaging Activity

	Daily mean, per person
Messages sent/person	2.2
Messages read/person	64.4
Messages read/sent	29-to-1

Thus, the "average daily user" sent a mean of 2.2 messages and read a mean of 64.4 messages per day, yielding a read-to-sent ratio of 29-to-1.

Messages that PortaCom software considers to have been "read" are not necessarily read in detail or even read at all. In fact, less than a third (29%) of questionnaire respondents said they read all of their messages. Users can avoid reading messages by scanning them, or using the "only" command, allowing them to tell PortaCom that they wish to read "only" a

certain number of the unread messages that are waiting for them in a conference. Extensive PortaCom experience suggests that this means is frequently used to deal with message overload.

C. Time Online and Session Data

Time online is presented in two ways: mean total time spent on PortaCom and mean daily "average user" time online per day.

The table below presents totals for time spent on PortaCom as well as daily, weekly, and monthly means:

Table 7.6: Summary, Total Time on PortaCom

	Daily Mean	Weekly Mean	Monthly Mean	Total, Study Period
Hours on PortaCom	104.0	730.0	3,143.0	25,547.0
Sessions	187.0	1,303.0	5,653.0	45,601.0
Minutes/session	33.4	33.6	33.4	33.6

It will be recalled that a session occurs any time anyone logs on to PortaCom, including multiple sign-ons by one person. Thus, this table shows that on the average PortaCom was logged on to 187 times per day and that each session lasted a mean of about 33 minutes.

The following table presents mean daily individual time and session information:

Table 7.7: Summary, Individual Time & Sessions on PortaCom

	Daily Mean
Active users:	74.0
Sessions/person	2.5
Minutes/session	33.4
Time/person	84.3

D. Conference Activity

Conference activity is viewed in two ways: system conference message

data and respondent input to the question, "Which conferences are most important to you?"

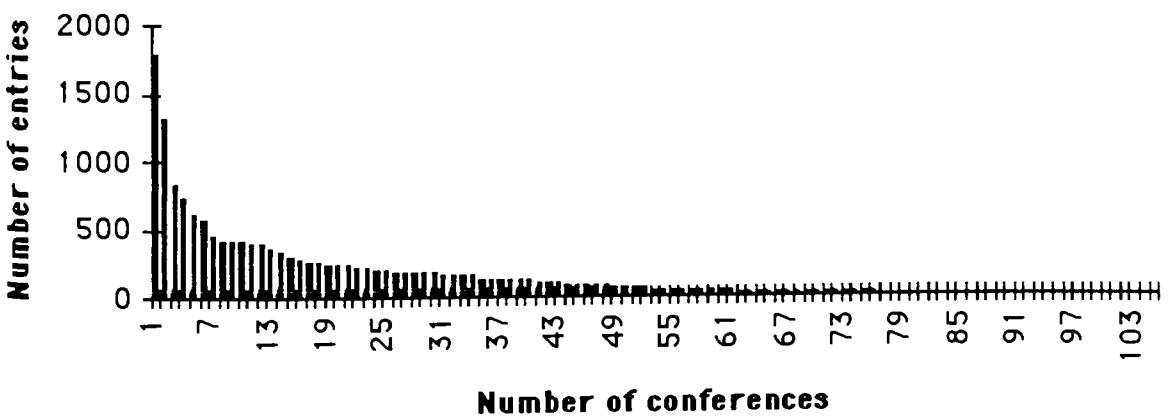
The table below depicts conference message activity. The table depicts only the number of entries posted, not entries read, as PortaCom does not keep track of entries read on a per conference basis.

Table 7.8: Total Entries, Conferences During Study Period

Number of entries	Number of conferences with this number of entries
1501-2000	1
1001-1500	1
501-1000	4
251-500	12
101-250	24
0-100	63
TOTAL	105

The following graph depicts this information:

Figure 7.1: Total Conference Entries



Both the table and graph dramatize the following points:

1. The overwhelming majority of entries are concentrated in a very few conferences.

2. A large number of conferences are comparatively inactive.

Respondent input to the question "Which conferences are the most important to you?" produced similar patterns:

Table 7.9: Most Important Conferences

Number of people citing a conference as important	Number of conferences cited as important by that many people
11-20	1
6-10	5
4-5	7
1-3	42

Very few conferences were seen as important by many respondents, while the vast majority of conferences (42) were cited by only 1-3 respondents as important.

The following tables help to show that system data and respondent input converge on a concentration of activity in and feeling of importance about basically the same conferences. In both tables, the ten top conferences are listed, which account for about 50% of activity and user response respectively:

Table 7.10: Most Active Conferences by Number of Entries

	Conference name	Number of entries during study period	% of all study period messages	Cumulative % of all study period messages
1.	Open Forum	1789	11	11
2.	Questioning Love & Sex	1310	8	20
3.	GEOCON	822	5	25
4.	ED 432	723	5	29
5.	Well I Believe...	610	4	33
6.	Words of Wisdom	571	4	37
7.	First Amendment	450	3	40
8.	The Classifieds	418	3	42
9.	Education Forum	417	3	45
10.	Ask Dr. Vax	411	3	48

Table 7.11: Most Important Conferences According to Respondents

	Conference	Number of times cited as important	% of all responses	Cumulative % of all responses
1.	Open Forum	20	14	14
2.	Ask Dr. Vax	10	7	20
3.	Questioning Love & Sex	9	6	26
4.	The Classifieds	7	5	31
5.	Words of Wisdom	6	4	35
6.	Well I Believe	6	4	39
7.	Movie Reviews	5	3	43
8.	Education Forum	5	3	46
9.	Private conferences	5	3	49
10.	Psycho	4	3	52

There is a high degree of correspondence between the two conference lists, with 7 out of 10 conferences common to both lists. Three of the conferences that were most active but were not cited as most important to respondents (**GEO CON, ED 432,** and **First Amendment**) are the only 3 conferences in table 7.10 that are used for course work and thus require mandatory participation. The other 7 conferences are voluntary and largely unregulated in terms of level of participation.

It is informative to look at those conferences that were seen as most important but that were not most active. **Psycho** is one of the private, protected conferences mentioned earlier. As such, it has closed membership, is not publicized, and no one except its members know of its existence. **Psycho** was created by a small group of people who wanted to escape the problems of **Open Forum** and to create a peaceful and emotionally safe hiding place within PortaCom. I learned of it first through interviews with Ciri who was somewhat reluctant to tell me about it. When I asked the conference organizer if I could join **Psycho,** I was told politely, "No."

Although the questionnaire asked for conference names, 5 respondents specified "Private conferences," which I assume to mean the environment of

the private conferences to which they belong. **Movie Reviews** is a public conference in which members discuss movies and video rentals. It is fifteenth in the rank ordering of message activity with 305 messages during the study period, a relatively large number given the inactivity of most conferences.

A number of important points can be drawn from the data in these two tables:

1. Of the three basic groups of conference types mentioned earlier (academic, technical, and social), the overwhelming majority of activity occurs in social conferences even though academic conferences outnumber social conferences by 3 to 1 (see Table 6.1).

2. Of these three basic groups, respondents found social conferences far more important than either technical or academic conferences, even though academic conferences outnumber social conferences by 3 to 1 (see Table 6.1).

3. Two conferences form the hub of PortaCom activity: **Open Forum**, and **Questioning Love & Sex**. They account for 20% of all conference activity and have 3 to 10 times the activity of 90% of all other conferences. Both are social (versus technical or academic) in nature.

4. No required, academic conferences were among the top 10 most important. Academic conferences were rarely cited as being at all important.

5. One technical conference, **Ask Dr. Vax**, was among the top 10 in both activity and importance. Extensive experience on PortaCom suggests that **Ask Dr. Vax** is the most active, well respected PortaCom conference dealing with the technical aspects of using PortaCom, the UACN, and online pursuits in general.

8. THE PORTACOM USER GROUP: DEMOGRAPHICS, REPORTED PORTACOM USAGE, AND OTHER GENERAL INFORMATION

This chapter presents the results of Section 1 of the questionnaire. The purpose of this section is to provide an overview of the demographics of the respondent group, how respondents perceived their use of PortaCom, and general characteristics of the members of the respondent group. Information presented in this chapter will be helpful in discussing two characteristics of solidary community: social homogeneity and spatial boundedness. This overview divides into five sections:

1. gender, marital status, ethnicity, political and religious affiliations
2. Computer/modem ownership and access
3. PortaCom Macro usage patterns
4. PortaCom Micro usage patterns
5. Residency and Visitation Patterns

A. Demographics

Because most respondents were students, I wanted to know if PortaCom was attracting demographically distinct subsets of the student population. The student portion of the respondent population was compared with the overall UAS student population for the following characteristics: age, gender, ethnicity and student status. No comparisons were made of the other characteristics discussed in this section because UAS statistics were not available.

The following table presents age data of the entire respondent group in column A, the 71.1% of the respondents who identified themselves as students in column B, and all UAS students (UAS, 1992) in column C:

Table 8.1: Age Comparison of all respondents, respondents who identify themselves as students, and UAS student statistics (for all UAS students)

	Column A ALL QUESTIONNAIRE RESPONDENTS			Column B RESPONDENTS IDENTIFYING THEMSELVES AS STUDENTS			Column C UAS STATISTICS (ALL UAS STUDENTS)	
Age Categories	Frequency	Percent	Cumulative Percent	Frequency	Percent	Cumulative Percent	Percent	Cumulative Percent
50 and up	8	9.6	9.6	6	10.2	9.6	10.4	10.4
40 thru 49	22	26.5	36.1	13	22.0	32.2	25.3	35.7
30 thru 39	20	24.1	60.2	12	20.3	52.5	29.5	65.2
25 thru 29	14	16.9	77.1	10	16.9	69.4	12.1	77.3
20 to 24	5	6.0	83.1	4	6.8	76.2	12.3	89.6
16 to 19	11	13.3	96.4	11	18.6	4.8	8.6	98.2
1 to 16	3	3.6	100.0	3	5.1	100.0	no data	NA
no age data							1.8	100.0
Totals	83	100.0		59	100.0		100.0	

Two somewhat contrasting points can be derived from these data. First, all three categories show a high percentage of students older than 25. This finding suggests a student population and a respondent population that are more "mature" than might normally be expected for a predominantly undergraduate institution. Second, the respondent group, as well as those identifying themselves as students, has a much higher proportion of young people than the total UAS population. While less than one tenth of the UAS student population is younger than twenty years old, well over one quarter of the respondents identifying themselves as students (23.7%) fall into this age bracket. Thus, an unusually high percentage of young people are attracted to PortaCom.

Qualitative data suggests that the mix of a predominantly "mature" group and a number of younger people gives the PortaCom population a broad base of experience and perspective. This mix provides for interesting social dynamics, such as the cross-generational and interlational communication discussed in the qualitative data summary in Chapter 6, that would not be

present in more homogeneous or professionally-oriented online environments.

The student portion of the respondent group is predominantly male while the overall UAS population is roughly 68%/32% female/male (UAS Statistical Abstracts, 1992). The overwhelming majority of users (89%) are white, non-Hispanics. Filtering for just those who identified themselves as students revealed that the percentage of respondents who identify themselves as Native (3%) is far below UAS student percentage (13%). In addition, the percentage of "Anglo" students (89%) is nearly 15% higher than the UAS overall percentage (76%) (UAS, 1992).

The user group appears mature from the point of view of education as well. Well over half the respondents (60%) have at least a four-year degree. This finding would seem reasonable as the small town of Juneau (population 30,000) is the state capital whose primary year-round industries are state government, education, and legal services, which require an educated population.

However respondent data and overall UAS statistics are quite different in this respect. Respondent input indicates that of those identifying themselves as university students, well over one third (38%) are graduate students while just over half (55%) are undergraduate students. UAS statistics show that less than 2% of the student population at UAS is either part-time or full-time graduate students, while nearly the entire balance is composed of undergraduates.

Although there are a number of possible explanations for this difference, my involvement in PortaCom suggests that three are particularly important. First, graduate class sizes are usually much smaller than undergraduate classes, making computer conference activity for graduate classes much more manageable than those for undergraduate classes. Second, graduate level teachers are more disposed to experiment with using PortaCom largely because they have received exposure to PortaCom and have had a number

of opportunities to receive PortaCom training. Third, PortaCom computer conferencing accommodates a more mature group of students who, at the graduate level, have fewer face-to-face requirements and assume more independence in their approach to learning.

Respondent input concerning marital/relationship status is presented in the following table:

Table 8.2: Marital/Relationship Status

Categories	Frequency	Percent
single, not seriously involved	25	30.1
single, seriously involved	8	9.6
engaged to be married	2	2.4
living with someone	5	6.0
married	31	37.3
divorced	8	9.6
separated	3	3.6
other	1	1.2
Total:	83	100.0

One might expect to find those who are separated or divorced turning to PortaCom to increase their social opportunities. However, they make up only 13.2% of the respondents. Those who have relationships involving the least amount of commitment (single, not seriously involved) and the most amount of commitment (married) constitute the overwhelming majority of users (67.4%). This finding suggests the possibility that those who are either uninvolved or married are the people most in need of new social opportunities. More research in this area seems called for.

Respondent input regarding political and religious affiliations reveals that there is very little identification with what could be considered mainstream social groups. Only about one quarter (28%) were associated with the two major political parties (Democrat and Republican), while less than half (41%) were associated with traditional religious groups. Regarding political affiliation, the respondent group appears fairly balanced in that

there are exactly the same number of Republicans as Democrats (11).

B. Computer/modem ownership and access

The ability to take part in a CMC system is limited to those with computer and modem access. While the university provides computers with online access, using them requires being on campus during particular times. I was interested in how many respondents had access to computers and modems at home and work, which would greatly increase online accessibility and provide some indication of their commitment to or need to be a part of the online world. The results show that most respondents have ready access to online technology. The overwhelming majority of respondents own their own computers and modems and have online access at work. About half go online predominantly from home, about one quarter from the university, and about one tenth from work.

C. Macro usage patterns

Respondents were asked a number of questions about macro and micro usage patterns. Macro usage pertains to usage over time, whereas micro usage refers to patterns and behaviors while online. For the purpose of discussion in this section, a respondent is considered "active" if s/he used PortaCom at least a few times per week.

Three quarters of the respondents were PortaCom users during the school year preceding the study (September 1990 to May 1991) and nearly two thirds of these (65%) were active users. Only about half were active during the summer before the study. Because of reduced course offerings and decreased student enrollment during summer semester, summer PortaCom activity is predictably less than during the regular school year.

Most respondents considered themselves active during both semesters of the study periods (86% and 88% respectively), and just over two thirds (67%) of the respondents were on PortaCom every day during both semesters. This

level of usage indicates a very active user base. Respondents projected similar usage patterns for the year following the study as well. Over three quarters reported that they intended to be active during the following year and to use PortaCom at least once per day. A high degree of involvement in PortaCom is also suggested by response to a question about weekly usage. A little less than half (45%) spent at least 3 to 6 hours per week on PortaCom, while over three quarters (79%) are on for at least an hour or two per week.

Even though online communication has been available through the UACN and other online services for the past fifteen years, a little more than half the respondents (57%) had their first online experience relatively recently, since 1988. Increased involvement since 1988 is probably partly due to developments in online communication that have made it more affordable and friendly in the past five years. It is also due to a number of developments that started in 1988 at UAS. It was the first year PortaCom became functional. It was the first year the one-credit online communication course became widely available; the course has since attracted hundreds of people to PortaCom and the UACN. The year 1988 also marks the beginning of a trend in which UAS educators began attempting to incorporate online communication into course work.

Most respondents consider themselves relative newcomers to PortaCom. Data indicate that almost three quarters of respondents (74%) became active some time since the school year preceding this study. A little less than one quarter (23%) started using PortaCom because it was recommended, about one quarter (24%) because they heard about it and were curious, and a little over one third (39%) because it was part of a course. The first two options suggest a voluntary association with PortaCom and cumulatively represent almost half (47%) the respondent base.

D. Micro Usage Patterns

Respondents generally felt that they read far more messages than they

contributed, which was corroborated by system data. As was pointed out earlier, this pattern of use is not only understandable but also preferable. For each conference member to respond to each message in each conference of which s/he is a member is too time consuming and produces far more information than conference members can responsibly process.

Nearly forty percent of the respondents have been conference organizers. This is an important level because being an organizer represents an advanced stage of PortaCom involvement, somewhat akin to chairing a committee or becoming a project coordinator. Every PortaCom conference has an "organizer" who is responsible for all aspects of conference activity, including stewardship of discussion, maintenance of topic relevance, and enforcing codes of conduct, including taking disciplinary action.

My experience on PortaCom suggests two reasons for the high number of organizers. First, students in some classes, including my own, were asked to assume organizer status on a temporary basis as part of online facilitator training. And second, while only a few people have the software clearance to create conferences, to my knowledge no request for the establishment of a conference has ever been denied, including some of the highly controversial ones mentioned earlier. Because of this rather open administrative policy about PortaCom activity, requests for the establishment of conferences are encouraged. Those who ask to start conferences are obligated to become the organizer of any they create.

Once a user becomes adept at joining conferences and moving about in the PortaCom environment, it is natural to explore what is available. I wanted to compare the number of conferences respondents explored with the number of conferences to which they belonged. The findings show that, generally speaking, respondents explored up to twenty conferences in a year, and belonged to up to ten conferences at one time. The data indicate that of the conferences that respondents visit, about half are worth their continued

involvement.

I was also interested in the different kinds of online environments that respondents were involved in. That is, I was interested in how much time respondents spent in, in Hall's terms, intimate, private, and social space. Read only conferences, which correspond to Hall's "public space," were extremely rare; therefore I did not ask about them.

PortaCom conference use was far more prevalent than PortaCom mailbox use. Over three quarters of the respondents (78%) said they spent at least 75% of PortaCom time in conferences rather than in their mailboxes, and more than half (52%) said they spent all of their time in conferences. Only 5% said they spent 75% of their PortaCom time using mail. Thus, relatively speaking, respondents did not use PortaCom's intimate space very much.

About one third of the respondents (33%) cited spending all PortaCom time in public conferences as compared with one tenth who said they spent all PortaCom time in private conferences. In addition, well over half (5[illegible] of valid responses cited spending at least 75% of their time in public conferences, as compared with only about one quarter (23%) who cited spending at least 75% of their time in private conferences. Thus, respondents reported spending far more time in public than in private conferences, that is, much more time in social than in private space.

I also asked about time spent on PortaCom compared with time spent on other online services, such as BITNET and UACN mail. The results are displayed below:

Table 8.3: Total Time Spent Using PortaCom vs. Using Other Online Services (such as BITNET, UACN mail, CompuServe, etc.

Categories	Frequency	Percent	Cumulative Percent
all/almost all on PortaCom	4	4.8	4.8
about 75% PortaCom/25% non-PortaCom	12	14.5	19.3
about 50% PortaCom/50% non-PortaCom	21	25.3	44.6
about 25% PortaCom/75% non-PortaCom	29	34.9	79.5
all/almost non-PortaCom	13	15.7	95.2
other	3	3.6	98.8
don't know	1	1.2	100.0
		----	-----
	Total	83.0	100.0

The majority of the respondents reported spending far more time using online services other than PortaCom. Only about a fifth (19%) of respondents said they spent at least 75% of their online time on PortaCom, as compared with about half (51%) who said they spent 75% or more of their online time using other services.

Qualitative data suggest that online services other than PortaCom are largely email services and BITNET listserv activity, intimate and social space respectively. In fact, a primary difference between PortaCom and other online services is that PortaCom supports a great deal of private space. Findings indicate respondent preference for the use of intimate and public space rather than private space.

E. Residency and Visitation

Respondents were asked questions about where they lived and the degree to which they interacted with those inside and outside their neighborhoods. Data indicate that somewhat more than two thirds of the respondents (71%) live in Juneau. The data also indicate that while respondents do a great deal of local travelling, they do not often visit nor are they often visited by friends either within or outside their neighborhoods. The data indicate that most traveling is done for non-friendship purposes, such as work or shopping.

One interpretation of these data could be that PortaCom respondents are inactive people who stay at home, leaving only to work or shop. However, this image is inconsistent with data discussed later in this thesis concerning how respondents maintain relationships. Data indicate that in-person interaction is still by far the most important form of interaction in almost every category of interaction. Possible explanations for this apparent inconsistency include the importance of interacting with one's family or relationships at home, which may not be considered to be within one's "neighborhood," or the importance of in-person interactions at work that could be considered friendships rather than just co-worker relationships.

However, for those respondents for whom neither of these explanations is accurate, the data suggest that relationships are maintained through channels of communication other than in-person interaction. Which channels of communication respondents use to maintain relationships is the subject of the next chapter.

9. MODELS OF COMMUNITY - PRESENTATION OF RESULTS

This chapter presents an analysis of data collected for Sections 2, 3, 4, and 5 of the questionnaire. These sections address a number of the characteristics of solidary community, and all of the characterists of neighborhoods and personal networks, as described in Chapter Three. Chapter 10 discusses the results presented in Chapters 6-9, focussing on how PortaCom conforms and does not conform to the three models of community and how PortaCom expands and limits the notion of community.

A. Questions of Importance

Sections 3 and 4 of the questionnaire asked respondents to rate the importance of relationships and activities related to the personal network model of community study. Before discussing the results, it is necessary to discuss how "importance" is viewed in this study.

This study seeks to answer three basic questions about the importance of PortaCom as it relates to the categories of interaction:

1) How important is PortaCom individually?

2) How important is PortaCom relative to other channels of communication?

3) Are there important underlying dimensions to the PortaCom experience?

The approach used to answer each question is explained below.

Question 1. If half the respondents rated PortaCom as "≥ important", then PortaCom could be considered important in the lives of respondents for a particular category of interaction. Therefore median response values were used to look at the importance of PortaCom as a channel of communication.

Question 2. This question provides a holistic approach to the consideration of PortaCom as one of many channels of communication used by respondents.

Relative importance was computed by measuring the number of times a channel of interaction was rated as "≥ important" in relation to the number of times all channels of communication were rated as "≥ important." Media hierarchies were then derived which depict the relative importance of the different channels of communication for each category of interaction. As hierarchies began to appear with some regularity during this research project, I referred to them by their acronyms. Acronyms were developed using the following key:

1. **I** - In-person interaction
2. **T** - Telephone
3. **W** - Writing, written correspondence
4. **O** - Other online services (i.e., online services other than PortaCom)
5. **P** - PortaCom
6. **R** - Other

For example, the media hierarchy for the category of interaction **those you feel especially close to** is **I-T-W-O-P-R**:

*I*n-person-*T*elephone-*W*riting-*O*nline-*P*ortaCom-othe*R*

In other words, the respondent group as a whole rated "In-person interaction" as the most important channel of communication for the category **those you feel especially close to**, telephone as the second most important, and so on. Use of these acronyms is very helpful in facilitating discussion about different patterns of media use, particularly in the discussion of Section 3 of the questionnaire, in which media hierarchies are discussed for many categories of interaction and kinds of activities.

Question 3. Factor analysis and correlation analysis were used to identify interrelations among the data in order to discern the presence of underlying dimensions of the PortaCom experience.

B. Summary: Six Sets of Categories of Interaction

This section summarizes respondent input. All data tables upon which

the summary in this section is based appear in Appendix 3. Information is presented in terms of each of the six sets of categories of interaction explained in the previous chapter on methodology:

1. Set #1: Socially Defined Categories of Interaction
2. Set #2: Individually Defined Categories of Interaction
3. Set #3: New Relationships
4. Set #4: Education-related Categories of Interaction
5. Set #5: Emotional Support
6. Set #6: Help With Small Tasks

1. Set #1: Socially Defined Categories of Interaction

Three important points are drawn from the data:

1) Respondents identified in-person interaction as always being the most important form of interaction, except for **Family**, in which telephone is most important. Other than **Family**, telephone is second except for **Those with similar hobbies**, for which other online services is second.

2) Overall, PortaCom was not rated very highly for this set of interactions. PortaCom received a median score of "Important" for the category **colleagues and peers** and a median score of only "Somewhat important" for the categories **acquaintances** and **those with similar interests**.

3) PortaCom is always less important than other online services. PortaCom and other online services are nearly equivalent with telephone for three categories, **acquaintances, those with similar hobbies/interests**, and **Peers/colleagues**, presumably because of the expanded, asynchronous connections they offer.

2. Set #2: Individually Defined Categories of Interaction

Three important points are drawn from the data:

1) The results of the four categories of close, positive, personal relationships within this set (**those you feel especially close to,**

those you like spending time with, those who have an ongoing Presence in your life, those who are particularly influential in your life) are very similar. The median importance value for telephone and in-person is "Very important" or greater for each category. Each has an **I-T-O-P-W-R** media hierarchy.

2) Overall, neither PortaCom nor other online services figure prominently in this set. The median importance score of PortaCom was only "Somewhat important" for three categories (**those you feel especially close to, those who are particularly influential,** and **those you argue with**), and not at all important for **those who have an ongoing Presence** and **those you like to spend time with.**

3) The one exception in this set regarding the importance of PortaCom is the category **those you argue with.** PortaCom figures more prominently in this category of interaction than in any other.

3. Set #3: New Relationships

Three important points are drawn from the data:

1) The 83 respondents identified 419 close friends, 18 (4%) of whom were met on PortaCom and 40 (10%) of whom were met through other online services.

2) For the activity **meeting new people,** the median importance score of in-person interaction is "Very important" while the median importance score of PortaCom and other online services is "Somewhat important." The importance of writing and telephone are negligible. The results are very similar for the category **making new friends.**

3) **Meeting new people** and **making new friends** are 2 of the only 4 categories of interaction for which PortaCom and other online services are more important than all other channels of communication except in-person interaction.

4. Set #4: Education-related Categories of Interaction

Six important points are drawn from the data:

1) Of all three categories of interaction (**student-to-teacher, teacher-to-student, student-to-student**), in-person interaction is clearly the most important channel of communication, with all other channels far less important.

2) PortaCom is the second most important channel of interaction in the category **student-to-teacher.** The only other category for which PortaCom is second is **those you argue with.**

3) PortaCom figures more prominently in the category of interaction **student-to-student** than in any other category in this set.

4) Student-to-student writing is almost non-existent. Presumably this absence is because students do not need to write to each other as they can readily communicate in person, via telephone, or using online services.

5) Students cite PortaCom as more important for talking to teachers than teachers cite PortaCom as important for talking to students.

6) The media patterns are mixed.

5. Set #5: Emotional Support

Two important points are drawn from the data:

1) The importance of media in giving and receiving ongoing emotional support as well as crisis support appears similar and reciprocal. All four exhibit **I-T-O-W-P-R** hierarchy patterns.

2) In-person interaction has a median importance score of "Very important" for all four categories in this set. Telephone has a median score of "Important" for all four categories. All other channels of communication are of negligible importance.

6. Set #6: Help With Small Tasks

Three important points are drawn from the data:

1) The importance of media in giving and receiving help with offline tasks appears to be similar and reciprocal. Both categories of interaction

have **I-T-O-W-P-R** media hierarchies.

2) Only in-person interaction and telephone received median importance scores of "Important" or greater. All other channels of communication received a median score of "Somewhat important" or less.

3) The importance of PortaCom, other online services, and writing are very minimal and roughly equivalent.

C. Summary: Median Importance Scores

The table below summarizes the median importance scores for each communication channel within each of the 22 categories of interaction:

Table 9.1: Summary, Median Importance Scores

	In-person	Phone	PortaCom	Online	Writing
All 8 close friends	3	2	0	0	0
Meeting new people	4	0	1	1	0
Making new friends	4	0	1	1	0
Family and relatives	3	4	0	0	2
Co-workers	4	2	0	1	1
Acquaintances	2	1	1	1	0
Similar hobby/interest	3	1	1	2	1
Colleagues/peers	2	2	2	2	0
Feel especially close to	4	4	1	1	2
Like spending time with	4	3	0	1	0
Ongoing presence	4	3	0	1	2
Particularly influential	4	3	1	1	2
Those you argue with	2	0	1	0	0
If teacher, with students	4	2	1	1	2
If student, with other students	4	2	1	2	0
If student, with teacher	4	1	1	1	0
Receiving on-going emotional help	4	3	0	1	1
Giving on-going emotional help	4	3	0	1	1
Receiving crisis help	4	3	0	0	0
Giving crisis help	4	3	0	0	0
Asked for offline task help	3	3	0	0	0
Were asked for offline task help	3	3	0	0	0

KEY
0 = not all important
1 = somewhat important
2 = important
3 = very important
4 = extremely important

A number of important findings can be drawn from these data:

1) The median importance score of in-person interaction was "Important" or higher in all 22 categories. The median importance score of telephone interaction was "Important" or higher in 17 of 22 categories (77%). In-person and telephone interaction are particularly strong in areas of intimate and emotional contact.

2) All other forms of interaction are rated as minimally important. The median importance score of PortaCom interaction was "Important" in only one category: **Colleagues/peers**.

3) In most cases, PortaCom, other online services, and writing are important for different categories of interaction. This suggests each has different strengths in the maintenance of different relationships and the facilitation of different types of activity.

The following table offers a more detailed perspective of the importance of PortaCom. It lists the percentage of respondents who felt PortaCom was "Important" or higher for each of the categories:

Table 9.2: Summary, PortaCom Percentages ≥ Important for Each Category of Interaction, Sorted by PortaCom Percentage

Category of Interaction	PortaCom
Colleagues/peers	51%
Similar hobby/interest	49%
Student-to-student	48%
Student-to-teacher	48%
Meeting new people	46%
Acquaintances	43%
Those you argue with	35%
If teacher, with students	34%
Those who are particularly influential in your life	29%
Making new friends	27%
Those with an ongoing presence in your life	25%
Like spending time with	23%
Giving on-going emotional help	23%
Those you Feel especially close to	20%
Receiving crisis help	20%
Giving crisis help	19%
Receiving on-going emotional help	16%
Those you asked for offline task help	14%
All 8 close friends	13%
Those who asked you for offline task help	11%
Co-workers	9%
Family and relatives	3%

The data show that PortaCom is rated as at least "Important" for most categories of interaction by between one tenth and one half of respondents. The importance of this finding is discussed later in this chapter in the section that explores the existence of a core of PortaCom users.

D. Summary: Interaction Hierarchies

The following table shows the number of times each of the media hierarchies was identified. To demonstrate how to understand this table, line 1 should be read as follows: A total of 6 categories of interaction had an "importance" media hierarchy of **I-T-W-O-P-R** (**I**n-person, **T**elephone, **W**ritten correspondence, other **O**nline services, **P**ortaCom, and othe**R**).

Table 9.3: Number of Interaction Hierarchies

Pattern	Totals
1. I-T-W-O-P-R	6
2. I-T-O-P-W-R	5
3. I-T-O-W-P-R	4
4. I-O-P-W-T-R	2
5. I-O-P-T-W-R	1
6. T-I-W-O-P-R	1
7. T-I-O-P-W-R	1
8. I-P-T-O-W-R	1
9. I-P-O-T-W-R	1
Total	22

The following table helps to depict the relative importance of the individual forms of interaction. Each channel of communication within an interaction hierarchy is assigned one point for first place, two points for second place, and so on. The points are totaled, and the mean is then computed for each channel. Higher scores signify decreasing importance:

Table 9.4: Relative Importance, Channels of Communication

Channel	Total	Mean
In Person	24	1.09
Telephone	53	2.41
Other online services	71	3.23
Writing	90	4.09
PortaCom	92	4.18

A number of interesting patterns emerge from the preceding two tables that are useful in understanding the relative importance of the channels of communication:

1) In-person interaction is overwhelmingly the most important channel of communication, telephone is overwhelmingly the second most important. Although nine patterns were identified, three account for more than two-thirds of all categories: **I-T-W-O-P-R**, **I-T-O-P-W-R**, and **I-T-O-W-P-R**. All other patterns are minimally important in comparison. In all three of these patterns, in-person interaction is first; telephone is second. In-person

interaction and telephone occupy the top two positions, regardless of order, in 17 of 22 categories (77%).

2) PortaCom is never first, is second only twice, and is third only 3 times.

3) "Other" is always last, meaning that the questionnaire used a nearly complete list of forms of interaction. Of the 2573 possible times "other" could have been cited in this section (83 respondents X 31 categories of interaction = 2573), there were only 26 citings, including fax (8 times), 12-step meetings (5 times), audio conferencing (1 time), dreams (1 time), and touch (1 time).

4) Overall, there are three classes of media: In-person, telephone, and text (PortaCom, online services, and writing). In the vast majority of cases, text is less important than either in-person interaction or telephone.

5) Overall, there are two types of interactivity represented by these five channels: synchronous (in-person, telephone) and asynchronous (writing, PortaCom, and Other online services). In the vast majority of cases, synchronous is more important than asynchronous communication.

E. Factor Analysis of PortaCom Interaction Category Data

A principal components factor analysis was used to discern dimensions of interaction or activity related to PortaCom that help define the underlying importance of the PortaCom experience. Factor analysis of the PortaCom data for the interaction categories identified two dimensions. Each dimension is discussed below.

Table 9.5: Factor Analysis of PortaCom Interaction Category Data

Categories of Interaction	Factor #1: Newness Of Social Situation	Factor #2: Absence or Presence of Conflict
Family and relatives	-0.58508*	0.21895
Co-workers	-0.08566	-0.14655
Close friends	0.15781	0.43611
Those you argue with	0.16053	-0.67514*
Those you like to spend time with	-0.06288	0.74622*
Those with an ongoing presence in your life	-0.21311	0.43767
Acquaintances	-0.01296	-0.19249
Those who are influential in your life	-0.42198	0.52543*
Those with similar hobbies/interests	0.16251	-0.16360
Colleagues and peers	-0.54591*	0.01211
Meeting new people	0.74639*	0.03267
Making new friends	0.73744*	0.09491
Strengthening old friendships	0.31987	-0.11671
Receiving ongoing emotional support	0.45553	-0.01766
Receiving crisis support	-0.12724	-0.15486
Giving ongoing emotional support	0.19505	-0.30977
Receiving crisis support	-0.40808	-0.29727
Asked for offline task help	-0.25457	-0.21586
Were asked for offline task help	-0.37674	[illegible]
Teacher-to-student	-0.14911	[illegible]
Student-to-student	0.38967	[illegible]
Student-to-teacher	0.37277	[illegible]

* ≥ 0.5 or ≤ -0.5

1) Newness of Social Situation. The categories of interaction **making new friends** and **meeting new people** have a high loading on the first factor. These categories are most strongly associated with experiencing new social opportunities and pursuing new, undefined relationships. The categories **family and relatives** and **peers and colleagues** load heavily and negatively on this factor. These categories of interaction are strongly related to established, defined relationships. Therefore, the nature of this factor is related to the newness of a social situation. The label assigned to this quality of the PortaCom experience is "experiencing new social opportunities."

2) Absence or Presence of Conflict. The category **those you like**

to spend time with has a high loading on this factor, while **those who are influential in your life** has a more moderate loading. The category **those you argue with** has a fairly high negative loading on this factor, while **teacher-to-student** has a more moderate negative loading. Considered together, the data appear to identify a continuum defined by non-confrontational or comfortable communication on one end and confrontational and less comfortable communication on the other end.

While "arguing" seems quite clearly an expression of confrontation, teacher-to-student communication is not as clear. Qualitative data suggest that there are at least two reasons for teachers feeling confrontational. First, teachers found the democratizing effect of the computer conferencing environment an adjustment from a teacher-dominated learning environment. This adjustment was often not a positive experience. Second, many teachers found themselves frustrated with the technology as they pursued teaching courses using PortaCom. Frustration was caused by a lack of training, concern about the amount of time spent dealing with technology rather than the content of the course, and the overall experience of teaching in a new medium. Of the few teachers who were willing to try using PortaCom as a teaching tool, few used it in subsequent courses.

F. Finding Information

Respondents were asked to rate the importance of different channels of media in facilitating their personal and professional lives. The data revealed the following:

1) Respondents generally felt that in-person meetings, telephone conversations, and formal education provided the most important ways of obtaining information for their social/personal lives as well as their professional/educational lives.

2) For "finding information for social/personal life," the median importance score for in-person and telephone interaction was "Very important"

or higher. For formal education, the median was "Important" or higher. All other channels of media sources were of negligible importance.

3) For "finding information for professional life," the median importance score for in-person meetings and formal education was "Very important;" for telephone, PortaCom, other online services, magazines, and other it is "Important" or higher. The remaining two other media sources, newspapers and television, were of negligible importance.

4) Respondents generally felt that PortaCom was more important than only newspapers and TV as information sources for both their social/personal lives as well as professional/educational lives.

G. PortaCom as an Important Social Group

Respondents were asked to rate the importance of a number of different social groups. PortaCom came out near the bottom. In fact, the only group less important than PortaCom was "church or spiritual groups." Generally respondents felt the most important groups they belonged to were "friends" and "family" with nearly 40% of respondents rating these groups as "Extremely important." However, PortaCom was rated "Important" by 40% of respondents. Thus, even though PortaCom was not rated highly relatively speaking, it was still seen as important.

H. The Presence of Issues of Common Concern

A number of issues of concern about PortaCom were identified by focus groups, which questionnaire respondents were asked to rate using the same scale of importance used to rate the channels of communication. The median importance score of all issues was "Important" or higher.

In an attempt to understand issues of concern further, Spearman correlation analysis was used to correlate the importance ratings for all issues to try to determine what kinds of relationships existed among them. The table on the following page displays the results of the analysis:

Table 9.6: Correlation Matrix, PortaCom Issues

ISSUES	Enough room on VAX for PortaCom	Which users should get priority	Will there be enough $ for PCom	Ways of Handling Disputes	Free speech speech & censorship	[illegible]	How big should PCom be	Who controls PortaCom	UAS administrat support	Minors' access to adult mat
Enough room on VAX for PortaCom	1.0000 n=82	0.2754 n=82	0.7356* n=82	0.1115 n=82	-0.0369 n=82	[illegible] n=82	0.1953 n=82	-0.1345 n=82	0.3443 n=82	0.0971 n=75
Which users should get priority use	0.2754 n=82	1.0000 n=83	0.3454 n=83	0.1273 n=83	-0.0650 n=83	0.1496 n=83	0.0888 n=83	0.2240 n=83	0.2666 n=83	0.0117 n=76
Will there be enough $ for PortaCom	0.7356* n=82	0.3454 n=83	1.0000 n=83	0.1797 n=83	0.0362 n=83	0.0435 n=83	0.2598 n=83	0.0415 n=83	0.4724* n=83	0.2136 n=76
Way of handling disputes on PortaCom	0.1115 n=82	0.1273 n=83	0.1797 n=83	1.0000 n=83	0.3739 n=83	0.5543* n=83	0.4198* n=83	0.5319* n=83	0.3349 n=83	0.3404 n=76
Free speech and censorship	-0.0369 n=82	-0.0650 n=83	0.0362 n=83	0.3739 n=83	1.0000 n=83	0.4447* n=83	0.3989 n=83	0.5243* n=83	0.1481 n=83	0.4151* n=76
Issues of offensive behavior	-0.0330 n=82	0.1496 n=83	0.0435 n=83	0.5543* n=83	0.4447* n=83	1.0000 n=83	0.4067* n=83	0.5098* n=83	0.2045 n=83	0.3662 n=76
How big should PortaCom become	0.1953 n=82	0.0888 n=83	0.2598 n=83	0.4198* n=83	0.3989 n=83	0.4067* n=83	1.0000 n=83	0.4367* n=83	0.3718 n=83	0.4040* n=76
Who controls PortaCom	-0.1345 n=82	0.2240 n=83	0.0415 n=83	0.5319* n=83	0.5243* n=83	0.5098* n=83	0.4367* n=83	1.0000 n=83	0.3997 n=83	0.2614 n=76
UAS administrative support of PortaCom	0.3443 n=83	0.2666 n=83	0.4724* n=83	0.3349 n=83	0.1481 n=83	0.2045 n=83	0.3718 n=83	0.3997 n=83	1.0000 n=83	0.1229 n=76
Minors' access to adult material	0.0971 n=75	0.0117 n=76	0.2136 n=76	0.3404 n=76	0.4151* n=76	0.3662 n=76	0.4040* n=76	0.2614 n=76	0.1229 n=76	1.0000 n=76

* $\geq .4$; $p \leq .05$

Two "meta-issues" appear to underly the correlations:

a. Survival, both economic and political. The strongest correlation exists between issues #1 (Room on the VAX) and #3 (Enough money for PortaCom) (.7356, $p \leq .001$), which deal specifically with the two primary issues related to the survival of any human gathering: space and resources.

b. Who Controls PortaCom. Control of PortaCom is at the center of the second cluster, with strong connections to handling disputes, freedom of speech vs. censorship, and issues of offensive behavior. The "control" issue is central to the freedom of speech vs. censorship theme that recurs throughout this report. Much of the debate about behavioral limitations on PortaCom described in Chapter 6 involved discussion not only about the nature of these limitations but also about who had the authority to develop and enforce rules about them.

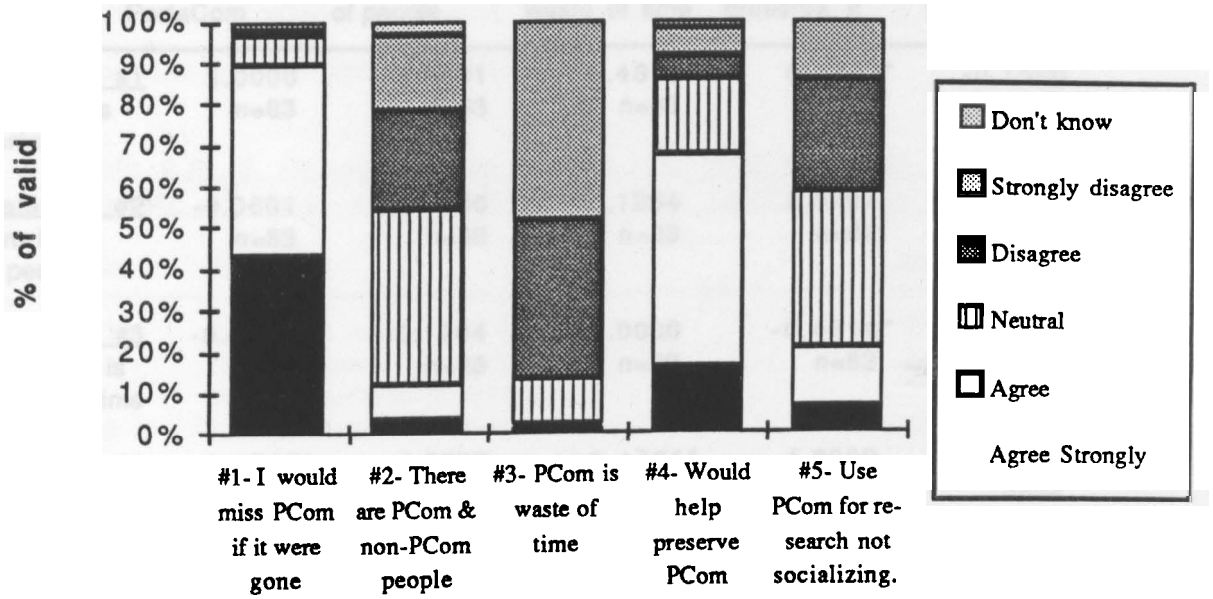
I. Attachment, Group Loyalty and Identity

In Part 1 of Section 5 of the questionnaire, respondents were asked to respond to five statements about PortaCom. The statements were designed to elicit reactions that would provide some indication of the sense of emotional attachment respondents felt to PortaCom and the extent to which they identified with it as a group. The 5 statements are:

1. I would miss PortaCom if it were no longer around.
2. There are two kinds of people: those on PortaCom and those not on PortaCom.
3. PortaCom is a waste of time.
4. If the existence of PortaCom were threatened, say through budget cuts, I would be willing to work or perhaps pay a fee to help preserve it.
5. I feel PortaCom should be used more for research and education than for general discussion and socializing.

The results are presented in the following chart:

Figure 9.1: Five Statements About PortaCom



The chart shows that of the five statements, three drew particularly strong responses: statements #1 and #4, both of which are strong positive statements about PortaCom, and statement #3, which is a strong negative statement about PortaCom. The correlation analysis that follows further shows that the results of these three statements are moderately correlated:

Table 9.7: Correlation Matrix, PortaCom Statements

	Statement #1 Would Miss PortaCom	Statement #2 Two kinds of people	Statement #3 PortaCom is waste of time	Statement #4 Would help preserve it	Statement #5 Research not socializing
Statement #1 Would miss PortaCom	1.0000 n=83	-0.0601 n=83	-0.4823* n=83	0.4767* n=82	-0.1500 n=83
Statement #2 Two kinds of people	-0.0601 n=83	1.0000 n=83	-0.1264 n=83	0.0797 n=82	0.0292 n=83
Statement #3 PortaCom is waste of time	-0.4823* n=83	-0.1264 n=83	1.0000 n=83	-0.4710* n=82	0.2478 (82)
Statement #4 Would help preserve it	0.4767* n=82	0.0797 n=82	-0.4701* n=82	1.0000 n=82	-0.0988 n=82
Statement #5 Research not socializing	-0.1500 n=83	0.0292 n=83	0.2478 n=83	-0.0988 n=82	1.0000 n=83

* ≥.4 or -.04≤; p≤ .05

Not surprisingly, the two positive statements (#1 and #4) are positively correlated while the one negative statement (#3) is negatively correlated with both positive statements (#1 and #4). These relationships suggest that the respondent group as a whole had a moderate feeling of attachment and/or loyalty to PortaCom. Statements #2 and #5 drew relatively neutral responses. The neutral response to statement #5 corroborates results to Questions 1 and 2 in Section 5 of the questionnaire suggesting that PortaCom is equally important in both social and professional spheres of the respondents' lives.

In Part 2 of Section 5 of the questionnaire, respondents were given an opportunity to respond in a more detailed manner to two of the five statements:

1) Statement 3: PortaCom is a waste of time.

2) Statement 5: If the existence of PortaCom were threatened, say through budget cuts, I would be willing to work or perhaps pay a fee to help preserve

it.

Respondents were asked if they agreed or disagreed with a series of possible reactions to someone telling them that PortaCom was a waste of time. The results appear in the following table:

Table 9.8: If someone were to tell you that they felt PortaCom was a waste of time, how would you likely feel? Choose all that apply:

Rank	Statement	% Apply
1	Curious as to why they said that.	75%
2	That the person saying it. didn't understand PortaCom.	64%
3	That if the person who said that knew more about PortaCom, they would feel more positive about it.	55%
4	That the person needs to be educated about PortaCom.	53%
5	That the person probably has never used PortaCom.	39%
6	Somewhat defensive.	27%
7	Wouldn't care - no big deal.	23%
8	Defensive	19%
9	That the person has an important point of view that I should listen to.	19%
10	Somewhat upset or angry	14%
11	That maybe they were right.	8%
12	Other	7%
13	Upset or angry	6%
14	That the person should be ignored because they obviously don't know what they are talking about.	5%
15	That they were essentially right	4%

Four of the most commonly chosen statements relate the feeling that PortaCom is a waste of time to a lack of education about or experience with PortaCom. Three of these statements imply, and one states outright, that if those who felt PortaCom was a waste of time knew more about it they would feel differently about it, presumably more positive. These results suggest that respondents think in terms of there being "in versus out" social groups relative to knowledge about PortaCom; some are "in-the-know" about PortaCom while others are not. Further, the results show that some feel a sense of

loyalty to the PortaCom group. A little more than one quarter (27%) of the respondents said they would feel somewhat defensive, about one fifth (19%) said they would feel defensive, about one sixth (14%) said they would be somewhat upset or angry.

However, the presence of "in versus out" groups and feelings of loyalty to PortaCom is tempered by four facts. First, curiosity, a rather non-committal and neutral feeling, was the respondents' predominant reaction. Second, almost no one agreed with Statement 2 in the previous part of the questionnaire which asked whether respondents felt there were two kinds of people: those on PortaCom versus those not on PortaCom. Third, nearly one quarter (23%) of the respondents said they would not care if someone said PortaCom was a waste of time. And fourth, only 6% said they would be upset or angry if someone made such a statement. Therefore, it seems that overall, respondents felt some sense of attachment to PortaCom and some sense of separateness from other groups, but not very strongly.

The second series of reactions pertains to the degree of commitment respondents would make to helping PortaCom if its existence were threatened. Again, respondents were asked to check all reactions that would apply:

Table 9.9: If the existence of PortaCom were threatened, say through budget cuts, what would you be willing to do to help preserve it? Please choose ALL that apply

Rank	Statement	% Apply
1	Sign a petition to help keep PortaCom.	88%
2	Write a letter in support of keeping PortaCom.	76%
3	I would pay a fee if I had to.	60%
4	Call someone who was influential in deciding PortaCom's fate.	41%
5	Attend a meeting about it.	41%
6	Help circulate a petition to help preserve PortaCom.	38%
7	Anything reasonable, as long as it didn't take a lot of time.	31%
8	Realistically, am too busy to help.	27%
9	Spend a few hours/week helping to organize an effort to keep it.	19%
10	I wouldn't be inspired to help.	6%
11	Other	6%

The desire to help PortaCom appears to be substantial, implying a high degree of loyalty and attachment to PortaCom. The first six most commonly chosen statements express willingness to make a personal commitment to keep PortaCom alive, including signing petitions, writing letters, calling influential people, and attending meetings. Fully 60% of the respondents said they would pay if necessary to keep PortaCom alive. All the negative or less enthusiastic statements appear at the bottom of the ranking, with one important exception. Most respondents (81%) balked at a personal commitment of a few hours a week to save PortaCom, suggesting that there is a limit for many to the feeling of loyalty or attachment to PortaCom when personal time commitments are involved. Once again, respondents appear to feel a moderate or qualified attachment or commitment to PortaCom as a group.

J. Core Groups of PortaCom Users

While PortaCom is eclipsed by the importance of in-person and telephone interaction, PortaCom was rated "Important" or better in almost every category of interaction by between ten and fifty percent of the respondent group. This raised the possibility of the existence of a core (or cores) of users for whom PortaCom was important.

Additional support for the existence of a core of PortaCom users was discovered by accident. Described earlier was the factor analysis that revealed underlying dimensions of the PortaCom experience. Correlation analysis was also performed on the same data in an effort to shed light on the dimensions revealed in the factor analysis. Cross-tabulation of the categories of interaction that loaded on the factors with the categories of interaction with high correlation coefficients revealed an important finding. Consistently, these cross-tabulations revealed large numbers of respondents concentrated in the "less than important" cells and a small number of respondents in the "important or greater cells," suggesting the possibility of the existence of a small core of PortaCom users who found PortaCom involvement to be an important experience on a fairly consistent basis.

Further analysis was needed to determine whether this small number of respondents consisted of the same people across categories of interaction or whether they consisted of different core groups. To facilitate this analysis, PortaCom interaction category data was examined to determine whether [illegible] groups of respondents were associated with the six sets of categories of interaction explained in the methodology chapter. For purposes of this analysis, respondents who rated a majority of the categories within a set as "≥ important" were considered to have a strong association with that set. For example, set #5, emotional support, consists of four categories of interaction. Respondents who rated at least three of these categories as "≥ important" were considered to have a strong association with this set. If respondents rated a majority of categories within multiple sets as "≥ important," then they were considered to be associated with that combination of sets.

Thirty-eight respondents had strong associations with at least one set while 45 respondents had weak or no associations with any set. The most prominent associations are displayed in the following table:

Table 9.10: Core Groups

Core Groups	Number Associated with Core Group
Education-related set	11
New relationships set	6

The 2 groups identified in the table are by far the most prominent. One combination of two sets (Individually defined categories of interaction and giving/receiving emotional support) had 4 members. All other sets or combinations of sets had only 1 or 2 members.

The two largest groups are mutually exclusive -- respondents who are associated with the education-related set are not associated with the new relationships set. Thus, there appear to be at least 2 distinct core groups of users, one whose members use PortaCom for predominantly educational purposes and the other whose members use it to facilitate new relationships (meeting new people and making new friends). Thus PortaCom was used by different groups of users for different purposes.

The question arose as to whether or not members of these core groups shared any common characteristics other than their association with particular categories of interaction. Cross-tabulations were performed to see if any demographic commonalities existed among members within each core group. This analysis showed that members within a core group shared no common characteristics and that they were fairly similar to the respondent group as a whole. Thus, it appears that members of each core group are associated not by demographics but by their reason for using PortaCom.

10. DISCUSSION - THREE MODELS OF COMMUNITY

Chapter 3 identified three models of community research and their characteristics. Chapters 6-9 presented the results of data analysis that related to these three models. In this chapter, I examine how appropriate it is, conceptually and empirically, to use these models for analyzing, describing, and understanding PortaCom as a community.

A. PortaCom as a Solidary Community

In this section, each of the characteristics of solidary community identified in Chapter 3 is discussed in turn.

1. Self-containment

PortaCom, or any virtual environment, is incapable of providing the resources and services that a group of people needs in order to sustain itself. Food, clothing, and shelter belong to the domain of the non-virtual world. Even as a communication environment, PortaCom is hardly self-contained. The data overwhelmingly support the fact that PortaCom is only one means of communication used by respondents to meet personal and group needs. In addition, it is almost never seen as the most important means.

PortaCom is not self-contained within the virtual world either. Online services other than PortaCom are almost always seen as more important than PortaCom as a means of facilitating social opportunities and maintaining personal relationships.

2. Non-transience

A predictable by-product of a lack of self-containment is a transient population. The data present mixed results in this regard. System data show

that during the period of the study the PortaCom user base was in a state of flux. The daily membership count varied from 346 to 570. The number of people who used PortaCom on a daily basis varied from 6 to 113. However, user input provides a somewhat different perspective. Most respondents considered themselves active during both semesters of the study period and projected similar usage patterns for the year following the study.

The number of conferences, the institutional infrastructure of PortaCom, fluctuated greatly as well. The number of public conferences varied from 48 to 61 during the study; the number of private conferences varied from 22 to 41 during the same period. However, the most popular conferences were stable during the period of study.

The PortaCom experience is built upon the co-existence of stability and change. While users depend on the presence of particular conferences and users to provide continuity of experience, they also depend on PortaCom to grow and evolve. One of PortaCom's most outstanding features, facilitating new social opportunities, depends in part upon a changing user base. As the users control the creation of conferences, they become the agents of change that stimulate PortaCom's evolution.

It seems reasonable to describe the PortaCom population as somewhat transient. It also seems reasonable to consider PortaCom itself as having a structural propensity toward change that allows users to come and go from the system easily and to create and abandon the conferences that serve as main components of its social structure. Thus, PortaCom does not meet the solidary community criterion of non-transience.

3. Social Homogeneity

Traditionally, social homogeneity refers to ethnic or racial homogeneity. While the respondent group is not strictly homogeneous in this sense, its members share some common social characteristics. For example,

PortaCom's primary users are students. Yet when compared to the overall UAS student population, users are disproportionately white, Caucasian, and male. This information could be potentially useful to that segment of the research community investigating longstanding concerns about gender and cultural bias in computing access and skills acquisition (Campbell, 1983, Charleston, 1991).

The respondent group also shares certain characteristics usually considered in social homogeneity, such as religious and political affiliation, but in a unique way. For the most part, they are overwhelmingly independent regarding political affiliations and largely unconventional in their religious affiliations. Thus, while they are not united by similar religion or politics, they are loosely associated by the lack of it.

4. Spatial Boundedness

There are two vantage points from which to consider boundedness: 1) the actual physical locale of those using PortaCom, and 2) the possibility of considering PortaCom as a bounded virtual environment within a larger [illegible] context.

Analysis of data concerning the physical locale of the PortaCom user base yields mixed results. Because online communication is largely asynchronous, communicators are often physically separated from one another -- online relationships are generally assumed to be geographically dispersed.* In the case of many online relationships, such as those maintained through Internet or BITNET, this assumption is quite often true. However, PortaCom is a fairly localized online phenomenon, and it is not clear how geographically dispersed the user group is. Because most of its users are UAS part-time students, the possibility exists that the user base shares a common physical locale. Yet the data offer only minimal support in this regard. While most who use PortaCom are part-time students, many are online students and thus can live elsewhere. About thirty percent live outside Juneau and use the state-

wide connectivity that the UACN offers to reach PortaCom. In addition, about one quarter of the respondents had moved to Juneau to go to school, for work, or other reasons and did not consider Juneau home.

The issue of geographic boundedness is also clouded by the fact that the Juneau area is a large city-borough, stretching fifty miles along the Southeast Alaska coast and containing six distinct living areas within which are many different neighborhoods. Users could live in the Juneau area and still be separated geographically in significant ways. Clearly, PortaCom is not geographically bounded the same way solidary communities are.

An analysis of PortaCom as a bounded virtual environment also produces mixed results. The ease with which users can "travel" from PortaCom to other online services obscures the boundaries between them. In a matter of seconds, a user can leave PortaCom and enter USENET, BITNET, Internet, and other online environments. Thus, traditional concepts of boundedness as serving to separate and isolate one area from another do not apply in the virtual world.

However, PortaCom is somewhat experientially bounded. Chapter 4 explained that PortaCom is somewhat isolated in virtual space because PortaCom is a closed environment -- correspondence cannot be directly sent from PortaCom to nodes on the major academic networks, like Internet and BITNET. Throughout the questionnaire, respondents were asked to respond to questions about different channels of communication, including PortaCom as distinct from online services other than PortaCom. Differences in the responses about these channels of communication indicate that they are seen as distinct online environments.

In addition, PortaCom was controlled by the UAS administration which was local to many users, and which was easily accessible by email and phone for those not living in Juneau. Thus users felt they could become involved with PortaCom to a degree that they could not with other online environments. That is, the communication media made PortaCom "feel" local. This matter is

discussed in some detail later in this chapter in the section dealing with neighborhoods.

The elusiveness and complexity of the issue of boundedness illustrates one of the most powerful differences between virtual and non-virtual environments. From the perspective of solidary community, geographic boundedness in large part defines community experience. In the virtual world, the concept of physical space loses its definition and often its relevance. It is difficult not only to determine whether PortaCom members inhabit a common space, but also whether such a determination has a significant bearing on understanding the nature of PortaCom as a social system.

5. Group Identity

This characteristic has to do with whether population members see themselves as a distinct group with issues and activities that provide a basis for group identity. This characteristic is addressed in some detail in a following section on neighborhoods beginning on page 124, for it lies at the heart of the neighborhood model of community. Suffice it to say for now that the data show that respondents felt a sense of qualified identification with and attachment to PortaCom as a group.

6. Overwhelming Presence of Kinship Members

Data clearly show that PortaCom is not used for interaction among kin. In fact, according to respondents, PortaCom was less important for maintaining communication with family and relatives than for any of the categories of interaction. Online services were also rated lower for this category than for any other. This finding is not surprising. Family members would have to be trained to use online technology and be mutually accessible on compatible networks in order to communicate. In contrast, the networks used to facilitate phone and written correspondence are transparent to users and do not present compatibility problems. That is, the national and international

phone and mail systems do not require special training or access privileges.

Simpler, more user-friendly and accessible online systems may well be developed to overcome these obstacles, luring those online who did not want to have to acquire new technological skills. I have witnessed the growth of a body of users who want to understand Internet just to be able to talk to family members, particularly children who are leaving home to attend to college. But widespread use of online systems for routine communication with family members seems far off.

An important point derives from the data. Online communication excels, as indicated in the previous chapter, in facilitating new social opportunities. A common characteristic of online relationships is often the fact that people meet online first and then develop relationships. But "family" implies a specific, pre-defined group of people. Trying to interact with family members online tries to reverse this order of events, moving already defined, offline relationships into the online world. Thus, it is not surprising that PortaCom does not readily facilitate familial relationships.

7. Rules and Customs Based on Tradition Rather Than Achieved Order

The concept of "tradition" usually implies behaviors, norms, and attitudes that have developed over time. As PortaCom has been functional for only a few years, it could be argued that it has not been in existence long enough to develop traditions. However, that issue aside, tradition also implies the existence of behavioral norms that are clearly and generally accepted by a social group. As the antithesis of the acceptance of normative behavior, achieved order is developed through the questioning of behavioral norms and the discussion of the efficacy and acceptability of the status quo.

PortaCom is a testimony to the struggle for rationally achieved order. Much of the qualitative data gathered during the course of this study focused on what seemed like a never-ending search for rules and limits. Some users

wanted them but were unable to agree on them. Others believed any rules and limits, regardless of their nature, to be an infringement of free expression. For example, a topic often heatedly debated was whether one PortaCom user had the right to impugn another user's sincerity or intelligence. In a typical round of debate, free speech advocates said "yes" while their adversaries felt that such behavior constituted harassment and demanded the right to exclude those who denigrated other users. Free speech advocates would then claim that such exclusion was a further limitation on their right to free speech, while their adversaries felt excluding those they found offensive was an expression of their right to determine who they associated with. Such debates were often cyclic and unresolved.

Attempts to create a government to establish rules and a voting system, as well as a loose judicial system to deal with infractions, failed. As the organizer of Open Forum, in which many of these concerns were debated, I suggested many times that those unhappy with the power structure of PortaCom propose something new. Nothing substantive was proposed. The power to deal with issues of free speech always defaulted to the system operator who had technical and administrative authority and who imposed very loose rules to curb extreme behavior. Literally any kind of conference for any purpose was allowed to be created, and most kinds of behavior were tolerated, providing very fertile ground for the pursuit of rationally achieved order.

B. PortaCom as Neighborhood

In this section, each of the characteristics of neighborhood identified in Chapter 3 is discussed in turn.

1. Presence of Issues of Common Concern

During the period of study, PortaCom was threatened by three outside forces:

1. Administrative defunding. At the time the questionnaire was

administered, overtaxation of the VAX's resources was causing it to malfunction regularly. This problem prompted debate among members of the university administration and the campus-wide computing committee about whether to eliminate or severely curtail the computer memory committed to the maintenance of PortaCom. Such a move could have severely limited PortaCom or even caused it to expire.

2. Control of behavior and/or prioritization of PortaCom resources and activities from outside PortaCom. During the period of study, free speech, dealing with offensive behavior, and determining who should be allowed to use PortaCom surfaced as important issues, both to those using PortaCom and to the UAS administration. Because complaints regarding these issues were made regularly to UAS officials, the university administration discussed creating behavioral guidelines for PortaCom activity. Adoption of such guidelines would have drastically changed the nature of the PortaCom environment. Even very liberal guidelines would have transformed PortaCom from an [illegible], self-governing social unit to one controlled by external authorities.

3. Negativity about PortaCom. As reported in the qualitative data summary earlier in this chapter, PortaCom received a great deal of visibility, largely due to negative reporting. One user complained directly to the Dean of Academic Affairs of UAS about censorship, an action that caused the administration to consider decommissioning PortaCom.

The presence of these forces created a climate of concern that permeated PortaCom. As a result of these forces, focus groups clearly identified issues related to PortaCom's survival and well-being. The many issues identified by respondents fell into two main categories: survival and freedom of speech versus censorship.

During the period of study there was little discussion about problems with other online services also easily available through the UACN. The combined effect of the lack of similar concerns with other online services,

the negative attention focused on PortaCom, and the subsequent concern for its survival, galvanized the PortaCom user group and increased PortaCom members' awareness of PortaCom as an online entity distinct from other online entities. This distinction was reinforced by the fact that users could identify a governing body (the UAS administration) to whom to appeal for help using a number of channels of communication, including in-person, phone, and email interaction. Identifying such a body is difficult if not impossible for many other online services, which are often international in scope, such as Internet and USENET. Users sensed that PortaCom was a local phenomenon over which they could exert some control. At times reaction by PortaCom members to crises resembled a group of concerned neighborhood citizens appealing to a city council for help in resolving border disputes and behavioral problems that could not be resolved through negotiation among dissenting members.

Beyond issues of actual physical survival, respondents were secondarily concerned with issues of free speech and censorship, providing a parallel with the hierarchy of needs generally followed in the non-virtual world: physical survival first, quality of life second. In the absence of the physical activities that cannot occur in virtual space, communication is "the life" of PortaCOM. Concern with quality of life is therefore focused on the quality of communication. Freedom of speech versus censorship becomes an extremely important issue because how these concerns are balanced defines in very large terms how people are allowed to communicate, what they are allowed to communicate about, and the overall quality of communication.

The issue of freedom of speech versus the need for censorship is well documented in the qualitative data summary Chapter 6. Participants who champion freedom of speech want to interact without restraint within PortaCom whereas censorship advocates are more concerned with another aspect of neighborhood indirectly addressed by this issue: safety. Censorship proponents were essentially advocating the establishment of behavioral norms

in an attempt to limit extreme behavior so that all members of the PortaCom system felt safe enough to "walk the virtual streets," as it were, without fear of being verbally attacked. A number of times during the study, people remarked that they would leave conferences or PortaCom altogether because they did not feel safe. After a contentious year dealing with what he called "online terrorists," a PortaCom system operator remarked:

> Yes, it [a feeling of safety you want in any community when you walk the streets] is the single most important issue [facing PortaCom]....[I]t's just that you have a balance of ...freedom of speech versus a right to be able to walk the streets safely. And um, that's where I've always gotten into trouble, because I've always put the value of being able to walk the streets safely ahead of freedom of speech....I don't want a world where we've got a whole lot of free speaking barbarians running around beating each other up with stone clubs. I'd much rather have a group of people who all admitted that we need to have some restrictions... (Focus Group #1, p. 27).

2. PortaCom as an Important Social Activity

Forty percent of respondents identified PortaCom as at least "Important" as a social activity and twenty percent as "Very important." Thus, it is clear that for many respondents, PortaCom provides a meaningful social activity.

The finer points of PortaCom's role as a social activity can be appreciated by comparing it with other online services. Extensive experience in the UACN environment indicates that "other online services" consist overwhelmingly of UACN email and, to a lesser extent, BITNET and Internet. It is not surprising that use of these services generally exceeds the use of PortaCom. While PortaCom offers a more integrated communication environment

than other online services, UACN email offers essentially free long distance communication with a far greater user base.

PortaCom is somewhat more important than other online services in two predominantly activities: fun/general discussion and discussing personal/social issues. The second of these activities is of particular interest because respondents rated other online services higher than PortaCom for interacting with *individuals* with whom they had individually defined, personal relationships. The data indicate that group-based aspects of the personal or social life of respondents are accommodated better by PortaCom than other online services, while respondents prefer using other online services over PortaCom for pursuing individual relationships of this nature. This preference is understandable as PortaCom is designed as a many-to-many activity whereas email is designed as a one-to-one activity.

The following focus group exchange corroborates this distinction between PortaCom as a social group and email as one-to-one channel of communication:

> Speaker #1: I'm actually interested in [what's] happened to the online world when we went from email to conferencing...you can listen to people, and because there's more people out there, too, there's groups, it's like, there's PEOPLE!
>
> Speaker #2: Well, I think the difference between email and conferencing is that there's a little more structure and sometimes if you're not quite sure what you want to say, but you are interested in joining a community, conferencing is a perfect way; you can go in and listen for a while...there are rules set up about what you are talking about and it's easier to join in and become part of it... (Focus Group #1, p.7).

Data show that the degree of importance users attach to PortaCom as a social activity varies greatly. However, qualitative data suggest that some users were extremely dependent upon PortaCom as a primary social activity.

The following statement by a focus group participant is perhaps representative of the 4% of the respondent group who rated PortaCom "Extremely important" as a social activity:

> I mean I am so dependent on it [PortaCom]. That is my social world and if I didn't have PortaCom, I mean, I felt like I wouldn't have anything (Focus Group #1, p. 26).

3. Attachment, Identity, and Membership

The data show that respondents felt a sense of qualified attachment to PortaCom as a group. While the shared concern among members about a number of PortaCom issues helped to forge a sense of identity, users would not make strong personal commitments to ensure PortaCom's survival. While respondents do not consider there to be a strong insider versus outsider relationship, they do consider those who speak poorly of PortaCom to be uneducated about it. This implies an outsider versus insider relationship, separating those who are "in the know" about PortaCom from those who are not.

However qualified this feeling of attachment and identity may be, it is nevertheless a positive statement about user association with PortaCom as a group to which they belong. The issue for the researcher then becomes, what is the nature of this group? That is, if PortaCom is a permutation or a virtual adaptation of a neighborhood-like entity, what kind of neighborhood is it?

Most PortaCom activity occurs in conferences that members join freely without external pressures, such as those created by work or school commitments. PortaCom activity is also fluid and constantly evolving, like a neighborhood continually being renovated. As an interactive environment that depends on user involvement in the creation and maintenance of new conferences, PortaCom's character is largely self-created and discovered by its user base, rather than imposed by administrative and other expectations.

PortaCom members were attached to and identified with, not a virtual "place," but a virtual experience that provides them the opportunity to craft their own environment. PortaCom members are attached to a qualitative social and intellectual experience and to the opportunity to create "a neighborhood of the mind."

C. PortaCom as Personal Network

This study was concerned with two main aspects of the personal network approach to understanding community: involvement with six sets of categories of interaction and the acquisition and use of information resources. Each is discussed in turn.

1. Set #1: Socially Defined Categories of Interaction

As explained earlier in the discussion of solidary community, PortaCom was predictably weak in maintaining ties with kin. However, data reveal that PortaCom is just as important as written correspondence in maintaining ties with co-workers. Experience suggests that this is due to a number of factors, including a geographically dispersed work force, work environments in which inter-office communication is less paper-oriented than more traditional office environments, and a work force that needs asynchronous communication to accommodate irregular working hours.

But it is not immediately clear from the data why co-workers would prefer PortaCom to other online services. Personal experience in using the UACN and PortaCom environments suggests two reasons. First, work issues tend to concern small group-based issues, and PortaCom is more oriented to small group collaboration than other online services through at UAS (such as BITNET, Internet, or UACN email). Second, PortaCom is much more easily adapted for local use in the creation and maintenance of group-based activity than any of the other options available through UAS. For example, creating BITNET listservs for use in purely local affairs is extremely cumbersome and

problematic.

The identification of PortaCom as a somewhat effective means of maintaining relationships with acquaintances is not surprising as it offers a great deal of opportunity to "bump into people." While PortaCom might not be a primary means of developing close friendships, it is an effective means of developing more indirect, marginal, or background relationships. It is literally impossible not to meet a number of people on PortaCom. Time limits the degree to which each relationship can be pursued, and thus some become acquaintances--relationships that do not require a great deal of time to maintain.

The category of interaction **those with similar interests** is one of the few categories in which PortaCom is rated more important than phone. This rating is not surprising as PortaCom has developed around groups that form specifically to discuss particular topics, ideas, and hobbies. Because of PortaCom's large user base, it is much easier to develop a critical mass of constituents using PortaCom than it is using face-to-face interaction, particularly regarding specialized or esoteric topics. It is not surprising that respondent input about the use of PortaCom to communicate with colleagues is similar to input about communicating with those who have similar interests. Because PortaCom expands access to colleagues, it makes sense that PortaCom would offer opportunities not available via synchronous channels of communication.

The data also suggest more voluntary kinds of connections. That is, while participation by co-workers or colleagues might be somewhat externally motivated by job or school requirements, involvement with the categories of interaction within this set is probably much more internally motivated. Personal experience online indicates that one of the main reasons people join PortaCom is to seek increased contact with colleagues and with those having similar interests. This desire is particularly important to people living in

remote places, like Alaska, and especially Juneau, which is only accessible by boat or plane. Again we see the importance of PortaCom as a social environment that participants join because they can meet new people.

There are a certain number of respondents who, as students or employees, need to be online because they are required to collaborate with peers and colleagues. However, data collected in response to the question "Why did you begin using PortaCom?" show that only about one third started using PortaCom because it was a course or work requirement. The rest began using it for less formal reasons. Qualitative data indicate that while some respondents may have entered the online world under external pressure to do so, such as to meet class requirements, fascination with it compelled them to explore it in far more depth than required by course commitments. Answers to the question about the total number of conferences respondents explored during the year provides additional insight. For example, some of the respondents were students in my telecommunications class, the most demanding class at [illegible] in terms of online involvement. While this class required participation in three conferences, well over one third of the respondents (36%) reported exploring between eleven and thirty conferences during the school year.

2. Set #2: Individually Defined Categories of Interaction

The vast majority of respondents greatly prefer in-person and phone interaction for maintaining the four personal, close, positive relationships in this set: **those you are close to, those you like to spend time with, those who have an ongoing presence in your life,** and **those who are most influential in your life.** The results of the in-depth section of the questionnaire dealing with close friendships only amplified evidence of this preference. Poignantly in this regard, factor analysis revealed no dimensions relating to close friendships or intimate relationships.

While the relevance of these four categories of interaction may be

readily apparent, the relevance of the fifth category of interaction in this set, **those you argue with**, may not be. It is derived from Wellman's caveat to the community researcher not to equate community with harmony. In a journal devoted to the topic of community, Macy puts this point quite bluntly: "[C]ommunity means dealing with some of the people you least want to be with" (Macy, 1992, p. 56). Also derived from the data is that some people like "to flame" and that flaming could set the tone for entire conferences within PortaCom, and sometimes for the entire PortaCom environment.

Given this background, the fact that PortaCom figures more prominently in this category of interaction than in any other indicates that it offers a popular and effective venue for arguing and that this is one of its most important communication functions. While the endless debate within PortaCom about freedom of speech is a testimony to the intellectual freedom felt by users, arguing is the most demonstrative display of the emotional freedom they felt.

The second dimension revealed by factor analysis of the interval category information, non-confrontational communication, is largely defined by two categories of interaction from this set: **those you argue with**, defining the negative end of the dimension's continuum, and **those you like to spend time with**, defining the positive end. This dimension serves as a microcosm of the PortaCom experience and corroborates the two sides of online freedom (discussed in the summary of qualitative data in Chapter 6) that are associated with asynchronicity and the lack of meta-information such as eye contact, body language, and voice inflection. On the positive side, online freedom encouraged communication, the pursuit of new relationships, and spending time engaging in activities not possible using other channels of communication. On the negative side, it allowed users to be argumentative and anti-social without having to deal directly with the confusion or pain caused by their actions.

3. Set #3: New Relationships

While the number of new close friends that respondents met on PortaCom may seem small (18), data gathered about two activities related to new relationships (**making new friends** and **meeting new people**) shed considerable light on this apparently insignificant figure. These are two of the only four categories of interaction for which PortaCom and other online services were more important than all other channels of communication other than in-person interaction. They are the only categories that loaded positively on the first dimension revealed by factor analysis of interaction category data, called "providing new social opportunities." Each category loaded very strongly on this dimension.

These results are not surprising. The new 900 phone services not withstanding, how does one make new friends or meet new people using the phone? Written correspondence can be used for this purpose with the effort through such means as pen pal programs, but pen pal relationships are hindered by the pace of exchanging written letters, which is typically much slower than exchanging messages using online communication. In addition, phone and letters facilitate primarily one-to-one rather than group-oriented activity.

The data indicate that one of the unique contributions of online media to the world of human interactions is precisely the fact that, other than in-person interactions, they provide the only medium capable of creating a social environment in which one can meet someone and/or gather in groups. That is, in the same way that online systems provide readily searchable libraries of information on a wide range of topics, they also provide a ready source of different kinds of interesting people who are generally online because they want to socialize. This general feeling is captured very well in the following focus group discussion:

Person #1: I just want to know why you are attracted to going online. I mean you could be doing something else. You could be reading, you could be in a bar, but you go online. Why do you do that?

Person #2: I think it is just to meet diverse people. Well, it's to meet new interesting people (Focus Group #2, p. 1).

But it is not just the availability of diverse people that encourages making new friends and meeting new people. It is also the comfort with which people can "cruise for connections," as one PortaCom user described it, and engage in socializing with a minimum of personal risk. The following focus group comments are typical in this regard:

> Another thing I like about telecommunications is that if you are talking about something formal, you know, if you are talking to someone face-to-face, you'd be up and you'd have good posture... whereas if you are telecommunicating you can lean back in your chair, put your feet up on the monitor, eat ice cream and flatulate (Focus Group #2, p. 5).

> ...[I]t is easier meeting people face to face [in PortaCom or online]...they don't see you when you are squirming...and you can think out your responses.... (Focus Group #1, p. 5).

> I've always kind of tried to shy away from meeting a lot of the people, not shy away actively but shy away passively. And I think primarily [what] it comes down [to] for me is that I try to watch myself real carefully, not trying to judge people overmuch, and I try to feel that PortaCom gives me an opportunity maybe to know people maybe in a truer way than I would have otherwise, because it's possible that I might dismiss a person or something that they say based on some kind of physical attribute, and that

> bothers me and I try to screen that out, but there is always that fear (Focus Group #1, p. 11).

Pursuing new relationships on PortaCom is facilitated not only by the diverse group of people who are available but also by the fact that PortaCom offers a comfortable social environment because it requires less reliance on the social skills needed in a face-to-face environment.

4. Set #4: Education-related Categories of Interaction

While PortaCom is not as important as phone or in-person interaction in this set of categories of interaction, it is clearly an important channel of communication. The largest core group of PortaCom users is education-related. Conferences with an educational theme outnumber social and technical conferences by a 3-to-1 ratio.

The popularity of PortaCom as an educational medium is perhaps best appreciated in historical terms. Twenty years ago, computer conferencing was just being invented. Ten years ago, it was just becoming available on a widespread basis. PortaCom had only been reliable for three years prior to this study. During the year of the study students reported that PortaCom was almost as important as using the phone for student-to-student communication.

The importance of PortaCom for educational purposes is no doubt a result of the focus at UAS on online communication. Even though UAS has only 10% of the total enrollment in the University system, it accounts for 40% of the mail traffic (UACN Billing Document, 1992). The presence of a master's degree in educational technology with a telecommunications emphasis, course offerings in telecommunications made available to the general public, and training opportunities for students, faculty, and staff in online skills create an unusually high interest in using the UACN and the online services it offers. The fact that student-to-teacher communication was seen by respondents as more important than teacher-to-student communication is perhaps a reflection of the

"safety" students might feel in interacting with those above them in the education hierarchy.

What does online communication replace in the educational experience of ten or twenty years ago? What does it add or detract? These questions would serve as interesting starting points for other research projects.

5. Set #5: Receiving and Giving Emotional Help

There are suggestions in the literature that people look for emotional support or fulfillment online (Gonzalez, 1989, Gumpert, 1987). However, unenthusiastic user response to questions about using PortaCom for these purposes, as well the fact that factor analysis did not reveal a "an emotional support" dimension, indicate that, overall, PortaCom is not used for emotional support. The vast majority of respondents giving and receiving emotional counsel prefer primarily synchronous media: phone and in-person interaction.

However, focus group discussion and personal experience suggest that, for emotional help, PortaCom is considered critical to some of its users. The following exchange is between two focus group participants, one of whom had just gone through a very stressful divorce. While her situation might not be typical, her comment provides testimony about PortaCom as a means by which users receive emotional support. Of note, once again, is a reference to the motivating effects of feeling emotionally safe while engaged in online communication:

> Person #1: ...I've gotten a lot of support on the computer this last year.
>
> Person #2: You mean like emotional support?
>
> Person #1: Oh, big time...[I]f somebody is asking you something online, you can sit in front of that screen and go through whatever contortions you happen to be going through and nobody has to see it (Focus Group #1, p. 2).

Using PortaCom as a source of general emotional connectedness with a group is more prevalent than using it for giving and receiving help with specific emotional problems. One focus group member described this aspect of attachment to PortaCom well when she credited PortaCom with being a "cure for loneliness" (Focus Group #1, p. 9). User awareness of this connectedness becomes especially acute when technical problems cause PortaCom to become inaccessible, or when PortaCom is relatively quiet due to reduced user activity. During such periods some users reflect on their attachment to PortaCom. A number of focus group members talked about going through withdrawal when PortaCom was down or inactive, as this focus group exchange illustrates:

> Person #1: A couple of weekends ago it was really dead [in PortaCom] and I went in there and it kept saying you've read all your news [PortaCom messages]. And I kept thinking that it's been hours, somebody *has* to have been here.
>
> Person #2: It's sort of like a drug withdrawal.
>
> Person #3: I think it's more...it's a kind of loneliness...[not finding PortaCom available] would be like calling up....your friends and getting, "I'm sorry. That number has been changed or disconnected (Focus group #1, p. 9)."

6. Set #5: Receiving and Giving Help With Offline Tasks

The categories of interaction within this set dealt specifically with using channels of communication to help arrange activities in the offline world, specifically help with small tasks. Results show that synchronous media are rated far more important than asynchronous media for this purpose, and that PortaCom had almost no utility in this regard.

Qualitative data suggest two reasons for this result. First, those to whom respondents turn for help in the non-virtual world are not PortaCom users. Second, PortaCom is simply not effective in facilitating or planning

some personal events that happen in the non-virtual world. Synchronous media allow for the immediate give-and-take necessary to set agendas and confirm details.

Most of the focus group discussion about the offline versus the online worlds suggests that many like the separation between the two. While one person reported using PortaCom as a way to resolve conflict with a friend (to smooth out the relationship in the offline world), the following comments by focus group participants were more common.

> And so I guess particularly with people that I tend to think highly of on-line, I try not to meet them because I'd be afraid, I guess, that some kind of prejudice that I have, that I don't know about, could get involved and somehow lessen that respect (Focus Group #1, p. 11).

> I've heard people say that they are more inclined to feel uncomfortable if they have actual physical contact with people rather than...some people who are really into PortaCom really don't want to meet the people. It's like, no -- let's keep this separate. This is PortaCom (Focus Group #1, p. 11).

Of note is that both quotations indicate that crossing from PortaCom into the non-virtual world would introduce a kind of contamination of the PortaCom experience. PortaCom users would rather connect with each other's ideas rather than each other, free of the potentially confusing considerations involved in face-to-face communication.

7. Acquisition of Professional & Social Information

Not surprisingly, PortaCom is more important as an information source for personal/social purposes than mass media (newspapers, TV, magazines). PortaCom is an interactive medium in which users contribute to a social environment that is designed to facilitate personal relationships and social affiliations. Mass

media, on the other hand, are passive media with limited utility in this regard.

While PortaCom was rated less important for finding professional information than for finding social/personal information, it was still valued by respondents for this purpose. It is easy to observe "the strength of weak ties" that it facilitates. **Online Classified**, a PortaCom conference advertising goods and services for sale, and a number of professional conferences within PortaCom bring people together who otherwise might not be able to associate. These people share technical information, the latest information about job openings and business machinery for sale, and sources of information on other networks. These activities help members of the user base to advance each other professionally.

Magazines are rated more important than PortaCom for professional reasons, presumably because respondents read magazines that are specifically devoted to their professional area. But again, other traditional mass media, like newspapers and television, are rated not nearly as important as PortaCom. While traditional media are broadcast-based, and professional magazines are a narrowcast medium, PortaCom facilitates both narrowcast and broadcast communication. It is easy to post a public message in PortaCom looking for specialized information. It is also easy to conduct a general search for discussion groups within PortaCom devoted to a narrow range of specific topics. PortaCom is a "searchable" social gathering.

The issue arises concerning the degree to which PortaCom has displaced other forms of media in the lives of PortaCom users. Although the study did not collect questionnaire data regarding this matter, the following focus group exchange is illuminating:

> Speaker #1: What was everyone doing before PortaCom came along?
>
> Speaker #2: ...I wrote lots of letters to my friends who are now mad because I'm not writing them anymore.
>
> Speaker #3: ...I wrote lots of letters. I read newspapers and magazines

and journals.

Speaker #4: And books.

Speaker #1: And you feel [PortaCom] has taken the place of that?

Speaker #2: Yeah some it.

Speaker #3: A lot of it (Focus Group #1, p. 8).

PortaCom provides an interactive channel of communication for processing information passively received via traditional mass media sources. In a number of instances, news gleaned from mass media served as the basis for group processing of local, national, and international events and information. For example, the organizer of a conference titled **Education Forum** regularly contributed information gleaned from professional education journals and state legislative records to serve as general information bulletins as well as the basis for group discussion. In another more emotionally-charged example, during Iran's invasion of Iraq and the Gulf War that ensued (1991-1992), **Open Forum** members were obsessed with discussion of the war. News from different media sources was compared, and views of the war were exchanged. **Open Forum** provided a unique means by which to process information about important events rather than simply to absorb it.

8. Core User Groups

Measures of strong association were developed to determine if there were core groups of users. Two core groups of users with mutually exclusive memberships were identified: those who use PortaCom for educational purposes and those who use it to pursue new social opportunities. The data showed that those associated with each core group had no distinguishing characteristics other than their association with particular categories of interaction. Of particular interest to this study were how the two groups differed and what the existence of these clearly delineated subgroups

indicated about PortaCom's internal social structure. These issues are discussed below.

The primary difference between the two groups lies in the nature of the activities they were engaged in. Members of the educational core group were students and teachers who were engaged in formal, defined social relationships. These relationships were work oriented and at least somewhat externally motivated. That is, teachers had a contractual obligation, and students had an academic obligation to engage in online discussion and to perform online tasks that were structured and group-oriented. Students depended on each another for input and discussion and in some cases for joint project collaboration. Online classes were conducted during a specific period. Students were under pressure to perform within deadlines in order to complete course work and receive grades.

In direct contrast, those looking for new social opportunities were engaged in self-directed, internally motivated activities with little or no obligation to perform defined tasks. These were the people who, in the vernacular, "cruised the net," looking for new social opportunities. There was little structure or commitment necessary in the relationships they pursued. There were no time frames, formal obligations, or other forms of external pressure to guide their actions. Thus, their participation was voluntary and self-defined.

We see here the distinction between work and recreation activities, a recurrent distinction in this study. In Chapter 7 a list of the ten most active conferences according to system data was compared with a list of the ten conferences rated most important by respondents. None of the education conferences that were most active were also identified as most important by respondents. In fact, the ten most favored conferences consisted entirely of conferences that involved voluntary membership and fairly informal relationships. The conferences most favored were used largely for recreation

and the exchange of informal information whereas the education conferences were used for work activity. Similarly, core user group information confirms that when strong measures of association are used, PortaCom is seen as accommodating two primary activities: 1) informal, recreation-oriented activity, and 2) formal, work-oriented activity.

Thus, PortaCom is flexible and powerful enough to accommodate two distinct populations of users who engage in two of life's most basic activities: work and recreation. This flexibility and power derive from the design of the PortaCom software and the open administrative policy that guides PortaCom's use at UAS. PortaCom users at UAS are allowed a great deal of latitude in the creation of recreational conferences that do not pertain directly to academic or administrative functions. This policy is in contrast with many office environments in which online communication is used mostly for work and in which recreational uses of CMC are considered largely a waste of time.

D. Summary: Three Models of Community Research

PortaCom is clearly neither a solidary community nor an adaptation of a solidary community. However, discovering how PortaCom does not fit the solidary community model helps to identify many of PortaCom's key characteristics. Viewed from a solidary community perspective, PortaCom is a spatially ambiguous, asynchronous environment consisting of a moderately transient, non-kinship-based population. The members of the population are somewhat socially homogeneous in that they are mostly white male students and unrepresentative of the UAS student body. They are loosely associated by their lack of common religious and political belief systems and by their involvement in a common pursuit of rationally achieved order.

Although PortaCom lacks one of the more defining qualities of a physical neighborhood, recognized boundaries, it does have certain

experiential boundaries. The presence of issues of concern help to create a PortaCom "identity" which is recognized by many of its members. Overall, respondents did see themselves as moderately attached to PortaCom and were willing to defend it when it was threatened. For many, PortaCom is an important social group; for some it is crucial as a focus for social activity. What is important is that some PortaCom members use it as an environment in which to pursue group purpose and activity. The study shows that PortaCom's ability to facilitate group experience is one of its most important qualities.

Understanding PortaCom's ability to facilitate personal networks is more straightforward than determining its status as a neighborhood because personal networks are geographically dispersed by definition. PortaCom's utility in maintaining geographically dispersed relationships is clear. While PortaCom is not nearly as important as phone and in-person interaction as a channel of communication, it does provide an important means of maintaining a number of different relationships and finding information to facilitate personal and professional pursuits. Between ten and fifty percent of respondents rated PortaCom at least "Important" for all categories of interaction that comprise personal networks. PortaCom excels in the area of facilitating communication with peers and colleagues. Two core groups of PortaCom users utilize PortaCom to maintain specific kinds of personal relationships, particularly for work, in this case school work (11 users), and for recreation (6 users), in particular expanding opportunities to socialize. While PortaCom is not used by many for intimate relationships, it is crucial to the few who use it for this purpose.

The fact that PortaCom functions as a basis for both group activity and identity as well as for individually-based, ego-centered networks is a key component of online community, the subject of the next section.

E. Online Community and Community Theory

The findings of this study inform community theory. Of particular interest are the possible existence and nature of new kinds of "community" that adapt to the virtual medium. But before a discussion of these issues, it is necessary to return briefly to the issue of "community" itself.

Chapter 3 contains a discussion of the conceptual problems associated with community study caused by the fact that the term "community" is used for many different purposes. In particular, modern adaptations of the term cover a wide variety of social experience, from limited associations, such as one's professional community, to more encompassing experiences, such as one's physical community and the sense of belonging attached to it. During the course of this study, I talked with many colleagues and others interested in this research project about the issue of "community." I came to appreciate that many felt an emotional attachment to the word "community." Some of those not involved with PortaCom felt strongly that the term "community" should not be used to refer to anything less than a fairly comprehensive social experience, which they felt a CMC system could not provide. However, some of those involved with PortaCom, particularly focus group participants, felt strongly that PortaCom did constitute a manifestation of community though they found this manifestation difficult to describe.

Emotional attachments aside, the terms "community" and "online community" are in wide use and need to be addressed as part of any study of the social structures within a CMC system. There are two approaches to using the concept of community in the study of online environments:

1) To avoid using the term "community" altogether and to use instead a term with fewer connotations. PortaCom might be viewed as an "association" or some other kind of limited social system. This approach would need to address specifically how PortaCom is not a community.

2) To use the concept of qualified "community," in which community is

clearly defined as a unique, specialized expression of community.

The second approach is the one taken here. Online community is viewed as a concept that, like other adaptations of community, both expands and limits the concept of community. The rest of this section explores the concept of online community, how it relates to the other models of community used in this study, and what it adds to conceptual considerations of community.

In his historical overview of media evolution, Levinson notes that there is "always a price to pay, a loss of prior communication ability, with each step forward" (p. 4, 1990). His second principle of media evolution states that "new media often retrieve elements of biological (natural) communication eclipsed by primitive media (which extend communication only by sacrificing some of its natural benefits)" (p.4, 1990). Consider the three primary communication technologies of modernity: telephones, radio, and television. Telephones connect in an interactive environment people who are separated by space. However, phone interaction is largely dyadic communication and rarely group oriented. Radio and television create vicarious group experience but at the expense of interactivity and group self-awareness.

Computer conferencing offers some compensation for the weaknesses in these technologies. A computer conferencing environment offers a new dimension to "community" because of a unique quality: it facilitates not only elements of personal networks but also of the neighborhood model of community. Online community is represented in the table below:

Table 10.1: Comparison of Different Forms of Community

	Group based **OR** Personal extension?	Geographically dispersed **OR** Geographically concentrated?
Neighborhood	Group	Concentrated
Personal Network	Personal	Dispersed
Online Community	Both	Both

A comparison of key aspects of the communication channels used to sustain community helps to illuminate other unique qualities of computer conferencing with regard to the concept of online community:

Table 10.2: Comparison of Channels of Communication

	Facilitates Group/Activity Identity?	Facilitates Extending Personal Network?	Accommodates Geographically Dispersed Communication?	Accommodates Asynchronous Communication?
Phone	NOT EASILY	YES	YES	YES*1
In-person interaction	YES	YES	NO	NO
Written Correspondence	NOT EASILY	YES	YES	YES
Computer conferencing	YES	YES	YES	YES*2

As mentioned earlier, technologies are synthesizing rapidly, making it difficult to form definitive distinctions among them in terms of these key aspects. As examples, I have marked two of these exceptions:

1) While phoning is usually associated with synchronous communication, there is widespread use of answering machine technology, which offers crude asynchronous communication.
2) While computer conferencing is usually associated with asynchronous communication, it is capable of sustaining crude synchronous communication.

However, the table adequately reflects common usage and strengths of these forms of communication, and thus a detailed analysis of all the exceptions that could be cited does not add anything substantive to this discussion.

As the table indicates, only computer conferencing allows asynchronous, geographically dispersed, personal, and group activity. However, the crux of computer conferencing's real power and unique contribution as a medium to the realization of community lies in the fact that it is the only medium that truly facilitates asynchronous group activity. As such it allows groups of people to interact in a common, virtual "space" that does not operate according to schedules. The benefits of asynchronicity are unique. The

online equivalent of a town meeting happens whenever people sign on. No one waits. There is no such thing as being late. No one misses any part of the meeting because all meeting activity is stored and retrievable. Both space *and* time are almost completely eliminated as barriers to forming this kind of group activity. I define online community as follows:

> **Online Community**: an asynchronous social system that, through the use of computer-mediated communication, facilitates: 1) geographically dispersed communication, 2) the extension and facilitation of one's personal network, and 3) group activity and identity.

But present in this definition are also the limitations of online community. Its greatest strengths, asynchronicity and geographic dispersal, are also its weaknesses. The lack of synchronous, geographically-based activity precludes many of the activities normally associated with living in a community, from dancing to communal dining. The fact that online community is a CMC-based activity reduces community to an exchange of, at present, primarily text. Online community, like all expressions of community in the modern age, is an act of limited, focused community, with its unique contribution to the expansion and limitation of human potential. The next section of this chapter deals specifically with those aspects of PortaCom that contribute to the expansion of human potential.

F. The Opportunity of Online Community

The combining of qualities of group-based communities and personal networks in an asynchronous environment creates resources and facilitates social opportunities not commonly found in either community model. Described below are the new resources and opportunities that PortaCom offers. Some of these are, no doubt, shared by other online environments. However, they represent the strongest qualities of PortaCom as indicated by the data. These qualities could inform future studies as a step toward understanding how an

increased involvement in online environments changes our behaviors and social expectations, in both virtual and non-virtual environments.

PortaCom offers:

1. Private, public, and restricted group-based communication within the same environment. The reader will recall the discussion in chapter 4 of online proxemics and the wide variety of communication that PortaCom offers users. Users can engage in private, personal, social, and public communication, which offer opportunities to develop many kinds of relationships.

2. Opportunities to meet new people and make new friends. This aspect of PortaCom surfaces many times during the course of the study. It is a truly unique contribution to social activity and the most poignant realization of Levinson's second principle of media evolution about retrieving elements of natural, in this case face-to-face, communication that were abandoned by other modern media.

3. The freedom and safety to express oneself about subjects often considered taboo in the non-virtual world. The overwhelming predominance of **Love and Sex** as one of the two focal conferences (Open Forum being the other) among the over one hundred conferences that PortaCom supported is testimony to what happens when people are uninhibited enough to discuss highly personal issues with strangers.

4. The freedom and safety to be more forthright about one's immediate feelings and in the process break individual and group behavioral norms of the non-virtual world. The overwhelming predominance of **Open Forum** as the other focal conference is testimony to what happens when people feel uninhibited enough to react "in the moment" rationally and emotionally.

5. An opportunity to pursue rational order. PortaCom is a hands-on, participant-driven act of social evolution. It represents an intellectual

version of what communes in the 1960's tried to produce in the non-virtual world, incorporating many individual concerns within an environment that has little authoritative structure or government.

6. Both a broadcast and narrowcast information medium. PortaCom facilitates a process by which users can easily appeal to a broad user group in order to locate information, experts, and discussion groups concerning very specific, often esoteric, interest areas.

7. Access to people grouped by interest. Related to the previous quality is the fact that PortaCom seems to be a community in which activities and people are searchable, based on interest. That is, it is a world in which people have announced their areas of interest (through "new user presentations" and by virtue of conference membership), the effect of which minimizes "start up time" in getting to know people and determining areas of compatibility.

8. Core Group co-existence. PortaCom is flexible and powerful enough, as software and as a social system, to maintain two largely independent groups of users engaged in two of life's main social functions: work and recreation.

G. The Future

Within the framework of Levinson's theory about the historical overview of the evolution of media, it is reasonably possible to predict the future evolution of the online environment by understanding its strengths and weaknesses. CMC developers will likely build upon CMC's abilities to facilitate group-based, geographically dispersed communication while addressing CMC's major weakness: as a text-based medium it conveys a very limited kind of information and thereby facilitates limited kinds of communication.

It appears fairly likely that the next step in the evolution of online

environments will be the synthesis of multi-media and networking. Each has what the other lacks. CMC-based networks offer social distribution on an international scale, but in largely text-based environments. On the other hand, current multi-media environments are generally "stand alone" and non-distributed (largely due to equipment and transmission costs) but are data-rich, incorporating text, graphics, voice, and video. The online environment will seek to regain the information it lost in becoming a world of words by incorporating these data sources in an interconnected web of resources.

The PortaCom of the future might well include conference messages consisting of audio and/or video information. PortaCom may also include drawings, charts, and other kinds of graphics that make the communication of complex ideas much easier. A number of inexpensive, multi-media programs already allow for this kind of communication, but they are not currently used within the context of a conferencing environment. Recent software products developed to transmit multi-media information on the Internet, such as Mosaic by NCSA, are plagued by bandwidth problems -- current data networks do not have the capacity to effectively transmit multi-media information. The transmission speed of the information varies with network traffic and is often slow. But the direction of CMC is clear: the restoration of some of the elements of communication lost by reducing communication to an exchange of text.

11. Conclusion and Call For Further Study

Micro versus Macro Perspective and a Call for Online Anthropology

I see the need to develop two different perspectives for researching online activity: the micro perspective and the macro perspective.

The micro perspective pursues a psychological understanding, focusing on users who are committed to an online environment and have included it as an important part of their lives. A follow-up study might well consist of interviews with core group members to determine the nature of their use of and attachment to PortaCom. In particular the researcher might attempt to determine whether there are types of people who are attracted to and dependent upon PortaCom or if there are personalities that are especially suited to PortaCom or the online environment in general. Such information would be invaluable to software developers, educators, business professionals, and designers of CMC.

The macro perspective is based on looking at the broad spectrum of online groups and conferencing systems, and analyzing and classifying them according to size, purpose, behavioral norms, social structure, ritual, and other characteristics that are usually associated with the pursuits of cultural anthropology. Research could benefit greatly if the broader fields of online studies and anthropology were to work together, applying online research techniques to anthropological objectives and methodology, perhaps forming a branch of study that might be called *online anthropology.*

In some ways, online anthropology is implied in the work of Hiltz (1984), Vallee (1979), and others. With the following statement, Hiltz came closest to calling such inquiry "online anthropology" when she concluded a

large case study of an office automation project involving computer conferencing. If online anthropology has a beginning point, it is this:

> Much of the early work in anthropology fell into the category of "ethnography": a description of a single society. Later, as this descriptive material accumulated, "ethnology," or the comparison of similar institutions across societies, became possible. A priority for future research on computer-mediated communication systems should be sufficient standardization of the types of data collected and the measurement used so that an "ethnology" of computer-mediated systems becomes possible (1984, p. 196).

Online anthropology will help provide the perspective needed to understand the structures and broad behavioral parameters of the "online world." And it will entice those from cultural anthropology to assume the task of trying to understand a fundamentally new kind of human gathering.

This study serves as a humble contribution to the development of this particular focus of the social sciences. It is my hope that in using conventional community theory to analyze a virtual social system, I helped to provide the means and perspective needed to advance online anthropology. In viewing PortaCom from the perspective of conventional community theory, we see from whence we came. In applying conventional community theory to the new environment of the virtual medium, perhaps we can also see where we are headed. PortaCom and the online world both limit and expand community. With enough foresight, we can guide the development of CMC to create the kinds of communities that will humanize our technological world.

APPENDIX I - QUESTIONNAIRE FOR THE STUDY OF PORTACOM

WHY STUDY PORTACOM? One of the most exciting things to happen in the past decade has been the creation of networks that connect thousands perhaps even millions of people from all over the world to communicate through their computers in a place many call "virtual space". At UAS, we are fortunate to have a very good, well-supported computer conferencing system, PortaCom, which currently connects up to 700 people in over one hundred conferences with focuses ranging from education to love and sex to first amendment rights.

WHY YOU ARE IMPORTANT Because computer conferencing is so new, this is a very unique kind of study, perhaps the only one of its kind in the world. This study recognizes you are one of the pioneer explorers of "virtual space" and is turning to you for input about how and why you include networks, conferencing systems, and PortaCom in your life. This research project will help students, faculty, staff, and the research community better understand life in "virtual space" and how computer conferencing is changing society. Thank you very much for being part of the project.

CONFIDENTIALITY Providing your name for this questionnaire is optional. Having your name is helpful, not only because it helps me keep track of who has answered the questionaire and who hasn't, but also because it enables me to conduct longitudinal research, perhaps contacting you some time in the future (2-3 years for now) to find out how your attitude toward PortaCom or computer conferencing has changed. You have my absolute and total assurance that all of your answers will be strictly confidential. If you provide your name, it will be removed from the questionnaire and substituted with a number before the data is reviewed, and stored in a confidential [illegible]. The only time I would use your name is perhaps to contact you later, as mentioned above.

TIME and DATES Based on the field test I conducted, I found [illegible] questionnaire will take you between 30 to 50 minutes to fill out. If you could return this by May 15th that would be much appreciated.

WHAT'S IN IT FOR YOU? AT LEAST A RUBLE...
Anyone who fills out the questionnaire is entitled to one Russian Ruble. You are also entitled to see a copy of my final report. If you would like to see the report, please let me know. Thank you again for your participation.

SECTION ONE. Please circle the number which corresponds to your answer. If you object to a particular question, please leave it and go to the next one.

There are some terms that are used throughout this questionnaire that need to be defined. They are:

* **this school year** refers to this academic school year, from August/September 1991 to April/May 1992 (roughly now).

* **the previous school year** refers to the August/September 1990 - April/May 1991 school year, the school year that ended about a year ago.

* **neighborhood** is defined as any place that you can walk to from home. **Outside your neighborhood** is any place you have to use transportation from home to get to.

* **online service other than PortaCom** is any service that you go online to reach other than PortaCom, such as BITNET, UACN email, Compuserve, etc.

* * * * * * * * * * * * * * *

Name (optional): _____

1. How old are you? _____

2. What is your gender? Please choose one:
   1. male
   2. female

3. Please estimate what your income level has been for the past 12 months. Please choose one:
   1. less than 10,000 per year
   2. 10,000 - 20,000 per year
   3. 20,000 - 30,000 per year
   4. 30,000 - 40,000 per year
   5. 40,000 - 50,000 per year
   6. Above 50,000 per year

4. How much formal education have you had? Please choose one:
   1. less than high school
   2. high school
   3. some college
   4. 4 year degree
   5. more than a 4 year degree
   6. other (please specify) _____

5. What is your marital status? Please choose one:
   1. single, not seriously involved
   2. single, seriously involved with someone
   3. engaged to be married
   4. living with someone in a long term relationship
   5. married
   6. divorced
   7. separated
   8. widowed
   9. Other (please specify if you like):_____

6. What is your race/ethnicity? Please choose one:
    1. Anglo (White, non-Hispanic)
    2. Hispanic
    3. African American, Black
    4. Native American, Native Indian
    5. Asian
    6. other (please specify if you like) _____

7. Which best describes your student status? Please choose one:
    1. not a student
    2. high school student
    3. part time university student, undergraduate level
    4. part time university student, graduate level
    5. full time university student, undergraduate level
    6. full time university student, graduate level
    7. other (please specify) _____

8. Are you a university teacher? Please choose one:
    1. yes, part time
    2. yes, full time
    3. normally yes but not this school year
    4. no
    5. other (please specify) _____

9. Are you a K-12 teacher? Please choose one:
    1. yes, part time
    2. yes, full time
    3. normally yes but not this school year
    4. no
    5. other (please specify) _____

10. Which best describes your relationship with the University of A... Southeast? Please choose one:
    1. teacher
    2. student
    3. classified employee
    4. administration
    5. no relationship at all
    6. other (please specify) _____

11. What has your work status been during this school year? Please choose one:
    1. mostly not working
    2. mostly working off an on
    3. mostly working part time
    4. mostly working full time
    5. other (please specify) _____

12. What has your housing situation been during this school year? Please choose one:
    1. own my own house, condo
    2. renting, student housing
    3. renting, off campus
    4. stay with family or friends on non-rent or limited rent basis
    5. other (please specify) _____

13. What geographic area have you been living in during this school year? Please choose one:

1. mostly Juneau-Douglas area
2. mostly Sitka area
3. mostly Ketchikan area
4. mostly area in Southeast Alaska other than Juneau, Sitka, or Ketchikan
5. mostly Anchorage area
6. mostly Fairbanks area
7. other (please specify) _____

14. Is where you have been living during this school year normally your home town? Please choose one:

1. yes
2. no
3. other (please specify) _____

15. If where you have been living during this school year is **not** your home town, why did you move? Please choose one:

1. not applicable- I have been living in my home town this year
2. to go to school
3. to take a job
4. spouse moved
5. other _____

16. Please estimate: during this school year what is the average number of times **per week** that you visit or are visited by friends who are living **in** your neighborhood? Please choose one:

1. 0 or 1 time
2. 2 to 3 times
3. 4 to 6 times
4. 7 to 15 times
5. more than 15 times
6. other (please specify) _____
7. don't know

17. Please estimate: during this school year what is the average number of times **per week** that you visit or are visited by friends who live **outside** your neighborhood? Please choose one:

1. 0 or 1 time
2. 2 to 3 times
3. 4 to 6 times
4. 7 to 15 times
5. more than 15 times
6. other (please specify) _____
7. don't know

18. Please estimate: during this school year what is the average number of times **per week** you use some form of transportation (car, bike, public transportation, whatever) for any reason (going to work, shopping, whatever). Please choose one:

1. 0 to 5 times
2. 6 to 10 times
3. 11 to 20 times
4. 21 to 30 times
5. more than 30
6. other (please estimate): _____
7. don't know

19. Did you own your own computer at the beginning of this school year (September, 1991)? Please choose one:

1. yes
2. no
3. other (please specify) _____

20. Did you buy a computer sometime since last September (September, 1991)? Please choose one:

1. yes
2. no
3. other (please specify) _____

21. Did you own your own modem at the beginning of this school year (September, 1991)? Please choose one:

1. yes
2. no
3. other (please specify) _____

22. Did you buy a modem sometime since last September (September, Please choose one:

1. yes
2. no
3. other (please specify) _____

23. Do you have regular access to a computer and modem at work? Please choose one:

1. yes
2. no
3. other (please specify) _____

24. What best describes your political leanings or affiliation? Please choose one:

1. republican
2. democrat
3. independent
4. not important to me
5. other (please specify if you wish): _____

25. What best describes your religious or spiritual leanings or affiliation? Please choose one:

1. Protestant
2. Catholic
3. Jewish
4. Moslem
5. Native religion
6. not important to me
7. other (please specify if you wish): _____

* * * * * * *

26. Please give a rough estimate of the year you went online for the first time using **ANY** online service (PortaCom, UACN email, Compuserve, an electronic bulletin board, whatever): _____

27. For the purpose of this question, a "regular participant" is defined as someone who interacts on PortaCom roughly on the average of at least once a week.

Please give a rough estimate of the year that you became a regular participant on PortaCom.

1. year became a regular PortaCom participant was: _____
2. not a regular pariticipant
3. other (please specify) _____

28. What caused you to begin using PortaCom? Please choose one:

1. it was part of a course
2. direct recommendation from someone
3. heard about it through the grapevine and was curious
4. other (please specify) _____
5. don't remember
6. the devil made me do it

NOTE: THE NEXT 6 QUESTIONS ASK ABOUT YOUR PRESENCE ON PORTACOM. ALL SIX QUESTIONS USE THE SAME CHOICES.

29. Generally speaking, how often did you use PortaCom during the **previous school year** (1990-1991 school year)? Please choose one:

1. several times a day
2. approximately once a day
3. a couple times a week
4. approximately once a week
5. couple times a month
6. once a month or less
7. didn't use it at all
8. other (please specify): _____
9. don't know

30. Generally speaking, how often did you use PortaCom **last summer** (Summer, 1991)? Please choose one:

1. several times a day
2. approximately once a day
3. a couple times a week
4. approximately once a week
5. couple times a month
6. once a month or less
7. didn't use it at all
8. other (please specify): _____
9. don't know

31. Generally speaking, how often did you use PortaCom during the **Fall Semester** (Fall, 1991)? Please choose one:

1. several times a day
2. approximately once a day
3. a couple times a week
4. approximately once a week
5. couple times a month
6. once a month or less
7. didn't use it at all
8. other (please specify): _____
9. don't know

32. Generally speaking, how often have you used PortaCom **this semester** (Spring, 1992)? Please choose one:

1. several times a day
2. approximately once a day
3. a couple times a week
4. approximately once a week
5. couple times a month
6. once a month or less
7. didn't use it at all
8. other (please specify): _____
9. don't know

33. Generally speaking, how often do you think you will use PortaCom **next year**? Please choose one:

1. several times a day
2. approximately once a day
3. a couple times a week
4. approximately once a week
5. couple times a month
6. once a month or less
7. didn't use it at all
8. other (please specify): _____
9. don't know

34. Generally speaking, how often do you think you will use online services otherthan PortaCom (such as UACN mail, BITNET, etc.) **next year**? Please choose one:

1. several times a day
2. approximately once a day
3. a couple times a week
4. approximately once a week
5. couple times a month
6. once a month or less
7. didn't use it at all
8. other (please specify): _____
9. don't know

35. Please estimate how many **hours per week** you generally spent using PortaCom this school year. Please choose one:

1. an hour or less
2. 1 to 2 hours
3. 3 to 6 hours
4. 6 to 10 hours
5. 10 to 15 hours
6. over 15 hours
7. other (please specify): _____
8. don't know

36. Generally speaking, how would you describe how you approached **reading** your PortaCom messages this school year? Please choose one:

1. read or scan very few, ignore quite a few
2. scan some, read some, ignore some
3. scan some, read many, ignore very few
4. scan a few, ignore a few, read most
5. read all
6. other (please specify) _____
7. don't know

37. Generally speaking, how would you describe how often you **contributed** PortaCom messages during this school year? Please choose one:

1. contribute rarely if at all
2. contribute now and then
3. contribute regularly
4. contribute a great deal
5. contribute every time or nearly every time I interact on Portacom
6. other (please specify) _____

38. During this school year were you ever a conference organizer on PortaCom? Please choose one:

1. yes
2. no
3. don't know what an organizer is
4. other (please specify) _____

39. Please estimate how many conferences you **currently** belong to. Please choose one:

1. 1 to 5
2. 6 to 10
3. 11 to 20
4. 21 to 30
5. more than 30

40. Please estimate: during this school year, what are the total number of PortaCom conferences you have explored, as either a participant or an observer? Please choose one:

1. 1 to 10
3. 11 to 20
4. 21 to 30
5. 31 to 40
6. 41 to 50
7. more than 50

41. Of the total time you spent online during this school year, please estimate how much was spent using PortaCom **vs.** using other online services (such as BITNET, UACN mail, Compuserve, etc.). Please choose one:

1. all or almost all online time was spent using Portacom
2. about 75% using Portacom, 25% using other online services
3. about 50% using Portacom, about 50% using other online services
4. about 25% using PortaCom, about 75% using other online services
5. all or almost all online time was spent **NOT** using Portacom
6. other (please specify): _____
7. don't know

42. Please estimate: during this school year how much of your time on **PortaCom** has been spent in conferences (reading and writing comments/notices) **vs.** in your PortaCom mail box (reading and writing letters). Please choose one:

1. all or almost all of my time was spent in **just** conferences
2. about 75% in conferences, 25% in mail box (reading/writing letters)
3. about 50% in conferences, 50% in mail box (reading/writing letters)
4. about 25% in conferences, 75% in mail box (reading/writing letters)
5. all or almost of my time was spent **only** in my mail box, reading/writing letters
6. other (please specify) _____
7. don't know

43. This question asks you to compare your activity in public vs. private conferences. A private conference is defined as any conference which is NOT public, including private, protected, or restricted conferences.

Please estimate: during this school year how much of the time you spent in PortaCom **conferences** (NOT mail) was spent in **private vs. public** conferences. Please choose one:

1. all or almost all of my time was spent in **just** public conferences
2. about 75% in public conferences, 25% in private
3. about 50% in public conferences, 50% in private
4. about 25% in public conferences, 75% in private
5. all or almost of my time was spent **only** in private conferences
6. other (please specify) _____
7. don't know

44. Which conferences are most important to you? Why?

45. Where do you work? Please choose one:
    1. mostly at home
    2. mostly at the university
    3. mostly at a work place other than home or the university
    4. other (please specify) _____

46. Where are you when you go online? Please choose one:
    1. mostly at home
    2. mostly at the university
    3. mostly at a work place other than home or the university
    4. other (please specify) _____

47. This is the end of Section One. Feel free to provide any comments below pertaining to the questions in this section:

SECTION TWO *** WORKSHEET ***

Please tear this sheet out of the questionnaire. It is not be turned in and is only meant to be used for your reference.

Think for a minute about those people you feel especially close to- in other words, those people whom you would probably refer to as your **close friends**. Now, in the blanks below write their names or initials. Again, **this will not be turned in** with the questionnaire. This is done only for your reference. I have provided blanks for up to 8 close friends. You are not expected to fill in each one, just as many as pertain to you. That is, if you feel only 3 people in your life qualify as close friends, then only fill in three of the blanks.

1. Close Friend #1 _____

2. Close Friend #2 _____

3. Close Friend #3 _____

4. Close Friend #4 _____

5. Close Friend #5 _____

6. Close Friend #6 _____

7. Close Friend #7 _____

8. Close Friend #8 _____

SECTION TWO, continued. Using the worksheet list of close friends as your guide, please answer the following sets of questions, one for each close friend you identified. Each set of questions is identical. If you have only identified, for example, three close friends, then only fill out only the first three sets and move to the end of this section on page 17. The scale used is:

	Not at all important	Somewhat important	Important	Very Important	Extremely Important	Don't know
You circle the number that represents your answer ===>>>	1	2	3	4	5	0

1. Close Friend #1
During this school year, how important to you have the following been as a means of interacting with this friend:

a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0

g. Did you meet this friend through PortaCom?
Please circle one: YES NO

h. Did you meet this friend through an online service other than Portacom?
Please circle one: YES NO

---

2. Close Friend #2
During this school year, how important to you have the following been as a means of interacting with this friend:

a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0

g. Did you meet this friend through PortaCom?
Please circle one: YES NO

h. Did you meet this friend through an online service other than Portacom?
Please circle one: YES NO

3. Close Friend #3
During this school year, how important to you have the following been as a means of interacting with this friend:

	Not at all important	Somewhat important	Important	Very Important	Extremely Important	Don't know
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0

g. Did you meet this friend through PortaCom?
Please circle one: YES NO

h. Did you meet this friend through an online service other than Portacom?
Please circle one: YES NO

---

4. Close Friend #4
During this school year, how important to you have the following been as a means of interacting with this friend:

a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0

g. Did you meet this friend through PortaCom?
Please circle one: YES NO

h. Did you meet this friend through an online service other than Portacom?
Please circle one: YES NO

	Not at all important	Somewhat important	Important	Very Important	Extremely Important	Don't know
5. Close Friend #5 During this school year, how important to you have the following been as a means of interacting with this friend:						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0

g. Did you meet this friend through PortaCom?
Please circle one: YES NO

h. Did you meet this friend through an online service other than Portacom?
Please circle one: YES NO

---

6. Close Friend #6 During this school year, how important to you have the following been as a means of interacting with this friend:						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0

g. Did you meet this friend through PortaCom?
Please circle one: YES NO

h. Did you meet this friend through an online service other than Portacom?
Please circle one: YES NO

	Not at all important	Somewhat important	Important	Very Important	Extremely Important	Don't know
7. Close Friend #7 During this school year, how important to you have the following been as a means of interacting with this friend:						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0

g. Did you meet this friend through PortaCom?
Please circle one: YES NO

h. Did you meet this friend through an online service other than Portacom?
Please circle one: YES NO

	Not at all important	Somewhat important	Important	Very Important	Extremely Important	Don't know
8. Close Friend #8 During this school year, how important to you have the following been as a means of interacting with this friend:						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0

g. Did you meet this friend through PortaCom?
Please circle one: YES NO

h. Did you meet this friend through an online service other than Portacom?
Please circle one: YES NO

9. Please estimate how many of the close friends you identified know each other at le
somewhat. Please choose one:

1. none or very few
2. about 25%
3. about 50%
4. about 75%
5. all or nearly all
6. other (please specify): _____

10. This is the end of Section Two. Feel free to offer any comments about this sectic

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PLEASE GO TO THE NEXT SECTION

SECTION THREE- This section asks for information about what role PortaCom and other ways of communicating play in your life in a general sense rather than with individuals. The importance scale and media choices used are the same as those used in the last section. **All the questions in this section have exactly the same format. I recommend you look at the first few questions to get a feel for the format and then proceed.**

* * * * * * * * * * * *

You circle the number that represents your answer ===>>>	Not at all important 1	Somewhat important 2	Important 3	Very Important 4	Extremely Important 5	Don't know 0
1. During this school year, how important to you have the following been as a means of interacting with **family and/or relatives:**						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0
2. During this school year, how important to you have the following been as a means of interacting with **co-workers:**						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0

	Not at all important	Somewhat important	Important	Very Important	Extremely Important	Don't know
3. During this school year, how important to you have the following been as a means of interacting with **those people you feel especially close to:**						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0
4. During this school year, how important to you have the following been as a means of interacting with **those you argue with:**						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4		
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0
5. During this school year, how important to you have the following been as a means of interacting with **people you like to spend a lot of time with:**						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0

	Not at all important	Somewhat important	Important	Very Important	Extremely Important	Don't know
6. During this school year, how important to you have the following been as a means of interacting with **those who have an ongoing presence in your life:**						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0
7. During this school year, how important to you have the following been as a means of interacting with **acquaintances:**						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0
8. During this school year, how important to you have the following been as a means of interacting with **those you consider particularly influential in your life:**						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0

	Not at all important	Somewhat important	Important	Very Important	Extremely Important	Don't know
9. During this school year, how important to you have the following been as a means of interacting with **people who share a similar hobby or interest:**						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0
10. During this school year, how important to you have the following been as a means of interacting with **colleagues or peers in your field:**						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0
11. During this school year, how important to you have the following been as a means of **meeting new people:**						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0

	Not at all important	Somewhat important	Important	Very Important	Extremely Important	Don't know
12. During this school year, how important to you have the following been as a means of **making new friends:**						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0
13. During this school year, how important to you have the following been as a means of either **stengthening old friendships** or helping you **get to know someone better that you already knew or were acquainted with:**						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0
14. During this school year, how important to you have the following been as a means of **asking for or receiving daily or ongoing emotional support:**						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0

	Not at all important	Somewhat important	Important	Very Important	Extremely Important	Don't know
15. During this school year, how important to you have the following been as a means of **asking for or receiving help in a crisis situation:**						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0
16. During this school year, how important to you have the following been as a means of **offering or giving daily or ongoing emotional support to others:**						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0
17. During this school year, how important to you have the following been as a means of **offering or giving help to others in a crisis situation:**						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0

	Not at all important	Somewhat important	Important	Very Important	Extremely Important	Don't know
18. During this school year, **when you asked others for help with a small task**, such as going shopping or moving furniture, how important have the following been for making the arrangements:						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0

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19. During this school year, when **others asked you for help with a small task**, such as going shopping or moving furniture, how important have the following been for making the arrangements:						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0

	Not at all important	Somewhat important	Important	Very Important	Extremely Important	Don't know
20. **IF YOU WERE A TEACHER THIS SCHOOL YEAR PLEASE ANSWER THIS QUESTION.** Otherwise please go to the next question.						
During this school year, how important to you have the following been as a means of interacting with **your students:**						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0
21. **IF YOU LEFT YOUR HOME TOWN THIS YEAR** and moved somewhere new, please answer this question. Otherwise go to the next question.						
How important to you have the following been for interacting **with those in your home town:**						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0

	Not at all important	Somewhat important	Important	Very Important	Extremely Important	Don't know
22. IF YOU WERE A STUDENT THIS SCHOOL YEAR PLEASE ANSWER THIS QUESTION AND THE NEXT ONE. Otherwise please go to question #24.						
During this school year, how important to you have the following been as a means of interacting with **fellow students:**						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0

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23. AGAIN, IF YOU WERE A STUDENT THIS SCHOOL YEAR PLEASE ANSWER THIS QUESTION. Otherwise please go to question #24.						
During this school year, how important to you have the following been as a means of interacting with **your teachers:**						
a. telephone:	1	2	3	4	5	0
b. speaking, interacing in person:	1	2	3	4	5	0
c. PortaCom:	1	2	3	4	5	0
d. online service other than PortaCom:	1	2	3	4	5	0
e. written correspondence:	1	2	3	4	5	0
f. other (please specify) _____:	1	2	3	4	5	0

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24. This is the end of Section Three. Feel free to make any comments about this section:

SECTION FOUR- In this section you are asked questions about how you find information, what you like to do, what kinds of transportation are important to you, and other odds and ends. The same scale of importance is used.

	Not at all important	Somewhat important	Important	Very Important	Extremely Important	Don't know
1. How important have the following been to you during the school year as a means of finding information to help or enhance your personal or social life:						
a. in person meetings:	1	2	3	4	5	0
b. phone conversations:	1	2	3	4	5	0
c. newspaper:	1	2	3	4	5	0
d. TV:	1	2	3	4	5	0
e. formal education:	1	2	3	4	5	0
f. portacom:	1	2	3	4	5	0
g. online group other than one on portacom:	1	2	3	4	5	0
h. magazines:	1	2	3	4	5	0
i. other (please specify):_____:	1	2	3	4	5	0
2. How important to you have the following information sources been during the school year as a means of finding information to help or enhance your professional life or educational career:						
a. in person meetings:	1	2	3	4	5	0
b. phone conversations:	1	2	3	4	5	0
c. newspaper:	1	2	3	4	5	0
d. TV:	1	2	3	4	5	0
e. formal education:	1	2	3	4	5	0
f. portacom:	1	2	3	4	5	0
g. online group other than one on portacom:	1	2	3	4	5	0
h. magazines:	1	2	3	4	5	0
i. other (please specify):_____:	1	2	3	4	5	0

	Not at all important	Somewhat important	Important	Very Important	Extremely Important	Don't know
3. How important to you has your involvement with the following groups been during this school year:						
a. church or spiritual group:	1	2	3	4	5	0
b. hobby or recreation group:	1	2	3	4	5	0
c. educational group (formal class, study group):	1	2	3	4	5	0
d. circle of friends which you see in person:	1	2	3	4	5	0
e. people at work:	1	2	3	4	5	0
f. family:	1	2	3	4	5	0
g. portacom:	1	2	3	4	5	0
h. online group other than one on portacom:	1	2	3	4	5	0
i. other (please specify) _____:	1	2	3	4	5	0
4. How important have the following activities been to you during the school year:						
a. spending time interacting with friends, face to face or on the phone:	1	2	3	4	5	0
b. spending time interacting with family:	1	2	3	4	5	0
c. working:	1	2	3	4	5	0
d. watching TV:	1	2	3	4	5	0
e. listening to the radio:	1	2	3	4	5	0
f. entertainment (for example, going to plays or movies):	1	2	3	4	5	0
g. practicing an avocation or sport:	1	2	3	4	5	0
h. reading:	1	2	3	4	5	0
i. spending time interacting on PortaCom:	1	2	3	4	5	0
j. spending time interacting on online services other than PortaCom:	1	2	3	4	5	0
k. other, please specifiy _____:	1	2	3	4	5	0

	Not at all important	Somewhat important	Important	Very Important	Extremely Important	Don't know
5. How important to you have the following means of transportation been (for any reason- work, shopping, whatever) during this school year in meeting your daily and/or ongoing transportation needs outside your neighborhood:						
a. own car:	1	2	3	4	5	0
b. borrowed car:	1	2	3	4	5	0
c. car pooling:	1	2	3	4	5	0
d. bicycle:	1	2	3	4	5	0
e. walking:	1	2	3	4	5	0
f. public transportion:	1	2	3	4	5	0
g. other (please specify): _____:	1	2	3	4	5	0

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6. During this school year, how important has PortaCom been as a means of:						
a. meeting class requirements:	1	2	3	4		0
b. colloborating with colleagues or fellow students:	1	2	3	4	5	0
c. coordinating projects with others:	1	2	3	4	5	0
d. meeting work requirements (as part of your job):	1	2	3	4	5	0
e. discussing personal or social life issues:	1	2	3	4	5	0
f. gaining technical information:	1	2	3	4	5	0
g. engaging in fun or general discussion:	1	2	3	4	5	0
h. other (please specify:) _____:	1	2	3	4	5	0

	Not at all important	Somewhat important	Important	Very Important	Extremely Important	Don't know
7. During this school year, how important have online services <u>other than</u> PortaCom (such as UACN mail, BITNET, etc.) been as a means of:						
a. meeting class requirements:	1	2	3	4	5	0
b. colloborating with colleagues or fellow students:	1	2	3	4	5	0
c. coordinating projects with others:	1	2	3	4	5	0
d. meeting work requirements (as part of your job):	1	2	3	4	5	0
e. discussing personal or social life issues:	1	2	3	4	5	0
f. gaining technical information:	1	2	3	4	5	0
g. engaging in fun or general discussion:	1	2	3	4	5	0
h. other (please specify:) _____:	1	2	3	4	5	0
8. How important are the following as issues which face PortaCom and its continued development:						
a. having enough room on the VAX to support PortaCom:	1	2	3	4		
b. which PortaCom users should get priority in terms of space, resources, and access:	1	2	3	4	5	0
c. will there be money to support it:	1	2	3	4	5	0
d. establishing/not establishing a way of handling disputes on PortaCom:	1	2	3	4	5	0
e. issues of free speech/censorship:	1	2	3	4	5	0
f. issues of offensive behavior:	1	2	3	4	5	0
g. how big PortaCom should get and open it should be:	1	2	3	4	5	0
h. issues of "who controls PortaCom":	1	2	3	4	5	0
i. UAS administrat. support of PortaCom:	1	2	3	4	5	0
j. issues surrounding legal minors having access to adult online material:	1	2	3	4	5	0
k. Other (please specify) _____:	1	2	3	4	5	0

9. Please feel free to comment on how you feel these issues facing PortaCom's development can or should be addressed. If more space is needed, feel free to continue on the back of the page:

10. This is the end of Section Four. Feel free to comment about the questions in this section:

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PLEASE GO TO THE NEXT SECTION

SECTION FIVE- The first part of this section asks you to rate the degree to which you agree or disagree with some statements using the following scale:

	Stronlgy Disagree	Disagree	Neutral	Agree	Stronlgy Agree	Don't know
You circle the number that best represents your answer ==>	1	2	3	4	5	0

* * * * * * * * *

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Don't know
1. STATEMENT: "I would miss PortaCom if it were no longer around."	1	2	3	4	5	0
2. STATEMENT: "There are two kinds of people: those on PortaCom and those not on PortaCom."	1	2	3	4	5	0
3. STATMENT: "Portacom is a waste of time."	1	2	3	4	5	0
4. STATEMENT: "If the existence of PortaCom were threatened, say through budget cuts, I would be willing to work or perhaps pay a fee to help preserve it."	1	2	3	4	5	0
5. STATEMENT: "I feel PortaCom should be used more for research and education than for general discussion and socializing."	1	2	3	4	5	0

6. If PortaCom were no longer around, what would you miss?

7. If someone were to tell you that he or she felt Portacom was a waste of time, how would you likely feel? Choose **ALL** that apply:

1. upset or angry
2. somewhat upset or angry
3. defensive
4. somewhat defensive
5. wouldn't care- no big deal
6. that mabye they were right
7. that they were essentially right
8. that the person saying it didn't understand PortaCom
9. curious as to why they said that
10. that if the person who said that knew more about PortaCom, they would feel more positive about it
11. that the person should be ignored because they obviously don't know what they are talking about
12. that the person needs to be educated about PortaCom
13. that the person probably has never used PortaCom
14. that the person has an important point of view I should listen to
15. Other (please specify): _____

8. In the space below, feel free to elaborate on your reaction to someone who said PortaCom was a waste of time:

9. If the existence of PortaCom was threatened, say through budget cuts, what would you be willing to do to help preserve it. Please choose **ALL** that apply:

1. I wouldn't be inspired to help
2. realistically I am too busy to help but would hope PortaCom survives
3. anything reasonable, as long as it doesn't take a lot of time
4. call someone who was influential in deciding PortaCom's fate
5. write a letter in support of keeping PortaCom
6. sign a petition to help keep PortaCom
6. help circulate a petition to preserve PortaCom
7. attend a meeting about it
8. spend a few hours a week helping to organize the effort to keep it
9. I would pay a fee if I had to
10. other (please specify) _____

10. Feel free to elaborate on what else you would do to help preserve PortaCom:

11. Overall, how would you rate your experience on Portacom during this school year:

1. bad or waste of time
2. okay some of the time
3. mostly good
4. mostly very good
5. always very good
6. other (please specify) _____

12. This is the end of Section Five and the end of the questionnaire. Feel free to comment on this section or the questionnaire overall:

THANK YOU VERY MUCH- AND DON'T FORGET TO ASK FOR YOUR RUBLE!

APPENDIX II - DATA TABLES

This appendix consists of data tables containing data collected for questionnaire Sections II and III. How to read the data table is explained below in terms of the information collected in response to the question: "During the school year, how important to you have the following been as a means of interacting with family and relatives? Phone, in-person interaction, PortaCom, Online services other than PortaCom, Writing, and other?"

Table A1. Family- Data Table

1. **SIII, Q1: Family**						
2.	Phone	In person	PortaCom	Online	Writing	Other
3. Don't know	0	0	0	0	0	2
4. Not at all important	3	9	74	61	11	4
5. Somewhat important	9	9	2	5	25	0
6. Important	6	12	1	4	20	0
7. Very important	21	15	1	4	17	0
8. Extremely important	43	35	0	4	8	0
9. Missing	1	3	5	5	2	77
10. Total	83	83	83	83	83	83
11. Total valid	82	80	78	78	81	6
12. Percent valid	99%	96%	94%	94%	98%	7%
13. = extremely important	52%	44%	0%	5%	10%	0%
14. => very important	78%	63%	1%	10%	31%	0%
15. => important	85%	78%	3%	15%	56%	0%
16. Total, => important	70	62	2	12	45	0
17. Relative	37%	32%	1%	6%	24%	0%
18. Relative, whole	37	32	1	6	24	0

Each row of the table is explained in turn.

Row #1 - The question and question title. This data table represents Section III, Question 1 and concerns family.

Row #2 - The different forms of interaction asked about in the questionnaire. "Online" refers to "other online services" (that is, online services other than PortaCom).

Rows #3-8 - The number of the number of times respondents cited these levels of importance for each form of interaction. These constitute "valid",

that is "non-blank," answers.

Rows #9 - The number of missing (blank) answers. For the purpose of this study these are considered invalid answers.

Row #10 - The number of total valid and non-valid answers. This should always equals 83 as there were 83 respondents.

Row #11 - The number of the number of non-blank answers.

Row #12 - The percentage of the total answers divided by the total number of valid answers (row 11/row 10).

Row #13 - "extremely important" is the percentage of valid responses that were extremely important. This is referenced in the discussion of levels of importance discussed a little later.

Row #14 - "≥ very important" is the percentage of valid responses that are equal to or greater than very important (that is, either very important or extremely important). This is referenced in the discussion of levels of importance discussed a little later.

Row #15 - "≥ important" is the percentage of valid responses that are equal to or greater than important (that is, either important, very important, or extremely important). This is referenced in the discussion of levels of The number ofimportance discussed a little later.

Rows #16-18 - These are used to represent the data in a more holistic, relative context. Row #16 consists of the total number of respondents citing each form of interaction as "≥ important." Row #17 is the total represented in row #16 divided by the total number of times forms of interaction were cited as "≥ important" for any media. For example, the total of row #16 is 191, which sums all the times that any form of interaction was seen as "≥ important." Phone was cited as "≥ important" 70 times. Thus, the relative importance of phone is 37% (70/191 = 37%).

Questionnaire Section II - Close Friends

SII, Q1: Close Friend #1

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	1	1	0	0	1	1
Not at all important	6	8	65	50	44	3
Somewhat important	17	9	9	7	17	0
Important	12	6	8	8	9	2
Very important	15	11	0	7	7	0
Extremely important	31	47	0	9	5	2
Missing	1	1	1	2	0	75
Total	83	83	83	83	83	83
Total valid	82	82	82	81	83	8
Percent valid	99%	99%	99%	98%	100%	10%
= extremely important	38%	57%	0%	11%	6%	25%
=> very important	56%	71%	0%	20%	14%	25%
=> important	71%	78%	10%	30%	25%	50%
Total, => important	58	64	8	24	21	4
Relative	32%	36%	4%	13%	12%	2%

SII, Q2: Close Friend #2

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	1	1	0	0	0	2
Not at all important	12	9	66	49	38	2
Somewhat important	15	9	6	5	17	0
Important	11	13	4	4	12	0
Very important	19	19	2	[illegible]	6	0
Extremely important	23	30	2	[illegible]	6	2
Missing	2	2	3	[illegible]	[illegible]	77
Total	83	83	83	83	[illegible]	83
Total valid	81	81	80	80	[illegible]	6
Percent valid	98%	98%	96%	96%	95%	7%
= extremely important	28%	37%	3%	14%	8%	33%
=> very important	52%	60%	5%	28%	15%	33%
=> important	65%	77%	10%	33%	30%	33%
Total, => important	53	62	8	26	24	2
Relative	30%	35%	5%	15%	14%	1%

SII, Q3: Close Friend #3

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	0	0	0	0	0	1
Not at all important	11	11	55	45	44	3
Somewhat important	14	9	10	6	13	0
Important	18	16	2	6	7	0
Very important	16	14	2	6	6	0
Extremely important	16	24	5	11	3	1
Missing	8	9	9	9	10	78
Total	83	83	83	83	83	83
Total valid	75	74	74	74	73	5
Percent valid	90%	89%	89%	89%	88%	6%
= extremely important	21%	32%	7%	15%	4%	20%
=> very important	43%	51%	9%	23%	12%	20%
=> important	67%	73%	12%	31%	22%	20%
Total, => important	50	54	9	23	16	1
Relative	33%	35%	6%	15%	10%	1%

SII, Q4: Close Friend #4

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	0	0	0	0	0	1
Not at all important	12	8	46	40	33	3
Somewhat important	14	7	6	7	13	1
Important	11	11	1	7	8	0
Very important	10	9	2	2	1	0
Extremely important	14	26	5	4	5	2
Missing	22	22	23	23	23	76
Total	83	83	83	83	83	83
Total valid	61	61	60	60	60	7
Percent valid	73%	73%	72%	72%	72%	8%
= extremely important	23%	43%	8%	7%	8%	29%
=> very important	39%	57%	12%	10%	10%	29%
=> important	57%	75%	13%	22%	23%	29%
Total, => important	35	46	8	13	14	2
Relative	30%	39%	7%	11%	12%	2%

SII, Q5: Close Friend #5

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	0	0	0	0	0	1
Not at all important	10	13	39	33	26	3
Somewhat important	9	6	6	3	5	0
Important	8	11	1	4	6	0
Very important	16	7	1	3	6	0
Extremely important	6	12	2	[illegible]	6	1
Missing	34	34	34	[illegible]	[illegible]	78
Total	83	83	83	[illegible]	[illegible]	83
Total valid	49	49	49	[illegible]	[illegible]	5
Percent valid	59%	59%	59%	[illegible]	[illegible]	6%
= extremely important	12%	24%	4%	12%	12%	20%
=> very important	45%	39%	6%	18%	24%	20%
=> important	61%	61%	8%	27%	37%	20%
Total, => important	30	30	4	13	18	1
Relative	31%	31%	4%	14%	19%	1%

SII, Q6: Close Friend #6

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	0	0	0	0	0	1
Not at all important	7	6	26	24	19	3
Somewhat important	9	8	4	2	7	0
Important	8	6	2	4	5	0
Very important	6	7	1	3	0	0
Extremely important	7	10	4	4	5	2
Missing	46	46	46	46	47	77
Total	83	83	83	83	83	83
Total valid	37	37	37	37	36	6
Percent valid	45%	45%	45%	45%	43%	7%
= extremely important	19%	27%	11%	11%	14%	33%
=> very important	35%	46%	14%	19%	14%	33%
=> important	57%	62%	19%	30%	28%	33%
Total, => important	21	23	7	11	10	2
Relative	28%	31%	9%	15%	14%	3%

SII, Q7: Close Friend #7

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	0	0	0	0	0	1
Not at all important	6	4	14	13	11	1
Somewhat important	7	6	2	1	1	0
Important	3	3	1	1	4	0
Very important	1	4	0	2	1	0
Extremely important	4	4	4	4	3	0
Missing	62	62	62	62	63	81
Total	83	83	83	83	83	83
Total valid	21	21	21	21	20	2
Percent valid	25%	25%	25%	25%	24%	2%
= extremely important	19%	19%	19%	19%	15%	0%
=> very important	24%	38%	19%	29%	20%	0%
=> important	38%	52%	24%	33%	40%	0%
Total, => important	8	11	5	7	8	0
Relative	21%	28%	13%	18%	21%	0%

SII, Q8: Close Friend #8

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	0	0	0	0	0	1
Not at all important	3	5	8	9	9	1
Somewhat important	4	3	1	1	2	0
Important	3	1	1	1	2	0
Very important	4	3	4	2	0	0
Extremely important	1	3	1	2	2	0
Missing	68	68	68	[illegible]	68	81
Total	83	83	83	[illegible]	[illegible]	83
Total valid	15	15	15	[illegible]	[illegible]	2
Percent valid	18%	18%	18%	[illegible]	[illegible]	2%
= extremely important	7%	20%	7%	[illegible]	[illegible]	0%
=> very important	33%	40%	33%	27%	13%	0%
=> important	53%	47%	40%	33%	27%	0%
Total, => important	8	7	6	5	4	0
Relative	27%	23%	20%	17%	13%	0%

SII, Q 1-8: All 8 Close Friends

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	2	2	0	0	1	9
Not at all important	67	64	319	263	224	19
Somewhat important	89	57	44	32	75	1
Important	74	67	20	35	53	2
Very important	87	74	12	36	27	0
Extremely important	102	156	23	51	35	10
Missing	243	244	246	247	249	623
Total	664	664	664	664	664	664
Total valid	421	420	418	417	415	41
Percent valid	63%	63%	63%	63%	63%	6%
= extremely important	24%	37%	6%	12%	8%	24%
=> very important	45%	55%	8%	21%	15%	24%
=> important	62%	71%	13%	29%	28%	29%
Total, => important	263	297	55	122	115	12
Relative	30%	34%	6%	14%	13%	1%

Questionniare Section III

SIII, Q1: Family

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	0	0	0	0	0	2
Not at all important	3	9	74	61	11	4
Somewhat important	9	9	2	5	25	0
Important	6	12	1	4	20	0
Very important	21	15	1	4	17	0
Extremely important	43	35	0	4	8	0
Missing	1	3	5	5	2	77
Total	83	83	83	83	83	83
Total valid	82	80	78	78	81	6
Percent valid	99%	96%	94%	94%	98%	7%
= extremely important	52%	44%	0%	5%	10%	0%
=> very important	78%	63%	1%	10%	31%	0%
=> important	85%	78%	3%	15%	56%	0%
Total, => important	70	62	2	12	45	0
Relative	37%	32%	1%	6%	24%	0%

SIII, Q2: Co-workers

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	1	1	1	1	1	4
Not at all important	12	5	48	29	38	9
Somewhat important	13	1	7	12	15	0
Important	18	13	8	14	14	1
Very important	19	13	8	14	6	0
Extremely important	17	48	7	11	5	2
Missing	3	2	4	2	4	67
Total	83	83	83	83	83	83
Total valid	80	81	79	81	79	16
Percent valid	96%	98%	95%	98%	95%	19%
= extremely important	21%	59%	9%	14%	6%	13%
=> very important	45%	75%	19%	31%	14%	13%
=> important	68%	91%	29%	48%	32%	19%
Total, => important	54	74	23	39	25	3
Relative	25%	34%	11%	18%	11%	1%

SIII, Q3: Those you are close to

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	0	0	0	0	1	3
Not at all important	3	1	44	35	17	3
Somewhat important	8	2	21	17	13	0
Important	9	11	9	9	28	0
Very important	20	16	4	9	12	0
Extremely important	42	53	3	12	12	1
Missing	1	0	2	1	0	76
Total	83	83	83	83	83	83
Total valid	82	83	81	82	83	7
Percent valid	99%	100%	98%	99%	100%	8%
= extremely important	51%	64%	4%	15%	14%	14%
=> very important	76%	83%	9%	26%	29%	14%
=> important	87%	96%	20%	37%	63%	14%
Total, => important	71	80	16	30	52	1
Relative	28%	32%	6%	12%	21%	0%

SIII, Q4: Those you argue with

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	4	4	3	3	4	2
Not at all important	38	9	36	46	45	5
Somewhat important	19	10	12	10	14	0
Important	9	23	11	10	6	0
Very important	5	12	10	3	3	0
Extremely important	3	22	7	5	6	1
Missing	5	3	4	6	5	75
Total	83	83	83	83	83	83
Total valid	78	80	79	77	78	8
Percent valid	94%	96%	95%	93%	94%	10%
= extremely important	4%	28%	9%	6%	8%	13%
=> very important	10%	43%	22%	10%	12%	13%
=> important	22%	71%	35%	23%	19%	13%
Total, => important	17	57	28	18	15	1
Relative	13%	23%	11%	7%	6%	0%

SIII, Q5: Those you like to spend a lot of time with

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	1	0	1	2	2	3
Not at all important	4	2	44	38	33	5
Somewhat important	16	0	18	13	15	0
Important	12	6	10	17	17	0
Very important	20	17	5	4	9	0
Extremely important	30	58	4	8	6	1
Missing	0	0	1	1	1	74
Total	83	83	83	83	83	83
Total valid	83	83	82	82	82	9
Percent valid	100%	100%	99%	99%	99%	11%
= extremely important	36%	70%	5%	10%	7%	11%
=> very important	60%	90%	11%	15%	18%	11%
=> important	75%	98%	23%	35%	39%	11%
Total, => important	62	81	19	29	32	1
Relative	28%	36%	8%	13%	14%	0%

SIII, Q6: Those who have an ongoing presence in your life

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	1	0	0	1	1	1
Not at all important	4	1	44	37	29	4
Somewhat important	10	5	17	14	11	1
Important	22	15	12	20	24	0
Very important	19	14	5	5	8	0
Extremely important	27	47	3	5	10	1
Missing	0	1	2	1	0	76
Total	83	83	83	83	83	83
Total valid	83	82	81	82	83	7
Percent valid	100%	99%	98%	99%	100%	8%
= extremely important	33%	57%	4%	6%	12%	14%
=> very important	55%	74%	10%	12%	22%	14%
=> important	82%	93%	25%	37%	51%	14%
Total, => important	68	76	20	30	42	1
Relative	29%	32%	8%	13%	18%	0%

SIII, Q7: Acquaintances

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	0	0	0	0	0	1
Not at all important	19	4	24	23	46	4
Somewhat important	27	19	23	22	16	0
Important	21	31	20	20	14	1
Very important	8	16	7	9	4	0
Extremely important	8	13	8	8	2	0
Missing	0	0	1	1	1	77
Total	83	83	83	83	83	83
Total valid	83	83	82	82	82	6
Percent valid	100%	100%	99%	99%	99%	7%
= extremely important	10%	16%	10%	10%	2%	0%
=> very important	19%	35%	18%	21%	7%	0%
=> important	45%	72%	43%	45%	24%	17%
Total, => important	37	60	35	37	20	1
Relative	19%	32%	18%	19%	11%	1%

SIII, Q8: Those who are particularly influential in your life

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	0	0	0	0	0	1
Not at all important	11	2	39	31	24	4
Somewhat important	12	1	16	18	12	0
Important	17	7	10	11	20	0
Very important	15	20	7	11	8	0
Extremely important	25	50	6	7	14	2
Missing	3	3	5	5	5	76
Total	83	83	83	83	83	83
Total valid	80	80	78	78	78	7
Percent valid	96%	96%	94%	94%	94%	8%
= extremely important	31%	63%	8%	9%	18%	29%
=> very important	50%	88%	17%	23%	28%	29%
=> important	71%	96%	29%	37%	54%	29%
Total, => important	57	77	23	29	42	2
Relative	25%	33%	10%	13%	18%	1%

SIII, Q9: Those who share a similar hobby or interest

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	1	1	0	1	1	2
Not at all important	18	4	24	21	37	3
Somewhat important	24	5	17	11	18	0
Important	22	27	21	22	15	0
Very important	9	21	13	13	7	1
Extremely important	7	23	6	12	1	1
Missing	2	2	2	3	4	76
Total	83	83	83	83	83	83
Total valid	81	81	81	80	79	7
Percent valid	98%	98%	98%	96%	95%	8%
= extremely important	9%	28%	7%	15%	1%	14%
=> very important	20%	54%	23%	31%	10%	29%
=> important	47%	88%	49%	59%	29%	29%
Total, => important	38	71	40	47	23	2
Relative	17%	32%	18%	21%	10%	1%

1. **SIII, Q10: Colleagues or peers in your field**

2.	Phone	In person	PortaCom	Online	Writing	Other
3. Don't know	1	1	1	1	2	2
4. Not at all important	12	3	26	15	30	4
5. Somewhat important	10	5	12	12	15	0
6. Important	15	13	15	20	13	0
7. Very important	25	26	11	18	12	2
8. Extremely important	17	32	14	14	7	1
9. Missing	3	3	4	3	4	74
10. Total	83	83	83	83	83	83
11. Total valid	80	80	79	80	79	9
12. Percent valid	96%	96%	95%	96%	95%	11%
13. = extremely important	21%	40%	18%	17%	9%	11%
14. => very important	53%	73%	32%	40%	24%	33%
15. => important	71%	89%	51%	65%	41%	33%
16. Total, => important	57	71	40	52	32	3
17. Relative	22%	28%	16%	20%	13%	1%

1. **SIII, Q11: Meeting new people**

2.	Phone	In person	PortaCom	Online	Writing	Other
3. Don't know	0	0	0	0	1	1
4. Not at all important	57	1	19	23	60	3
5. Somewhat important	14	7	26	20	9	2
6. Important	5	22	18	16	4	0
7. Very important	3	19	10	13	4	0
8. Extremely important	2	33	10	10	3	1
9. Missing	2	1	0	1	1	76
10. Total	83	83	83	83	83	83
11. Total valid	81	82	83	82	82	7
12. Percent valid	98%	99%	100%	99%	98%	8%
13. = extremely important	2%	40%	12%	12%	4%	14%
14. => very important	6%	63%	24%	28%	9%	14%
15. => important	12%	90%	46%	48%	14%	14%
16. Total, => important	10	74	38	39	11	1
17. Relative	6%	43%	22%	23%	6%	1%

1. **SIII, Q12: Making new friends**

2.	Phone	In person	PortaCom	Online	Writing	Other
3. Don't know	0	0	1	1	2	1
4. Not at all important	56	3	35	31	58	5
5. Somewhat important	16	8	23	22	9	1
6. Important	4	17	12	13	7	0
7. Very important	4	19	5	8	3	1
8. Extremely important	1	35	5	6	3	0
9. Missing	2	1	2	2	1	75
10. Total	83	83	83	83	83	83
11. Total valid	81	82	81	81	82	8
12. Percent valid	98%	99%	98%	98%	99%	10%
13. = extremely important	1%	43%	6%	7%	4%	0%
14. => very important	6%	66%	12%	17%	7%	13%
15. => important	11%	87%	27%	33%	16%	13%
16. Total, => important	9	71	22	27	13	1
17. Relative	6%	50%	15%	19%	9%	1%

SIII, Q13: Strengthening old friendships

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	0	1	0	0	1	1
Not at all important	12	4	31	30	36	5
Somewhat important	11	4	18	14	11	0
Important	15	10	16	12	14	0
Very important	21	20	7	10	5	0
Extremely important	20	40	7	14	12	1
Missing	4	4	4	3	4	76
Total	83	83	83	83	83	83
Total valid	79	79	79	80	79	7
Percent valid	95%	95%	95%	96%	95%	8%
= extremely important	25%	51%	9%	17%	15%	14%
=> very important	52%	76%	18%	30%	22%	14%
=> important	71%	89%	38%	45%	39%	14%
Total, => important	56	70	30	36	31	1
Relative	25%	31%	13%	16%	14%	0%

SIII, Q14R: Asking for or receiving ongoing emotional support

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	0	0	0	0	1	1
Not at all important	20	7	47	43	37	6
Somewhat important	11	6	21	12	15	0
Important	16	12	4	11	10	0
Very important	17	20	4	6	11	1
Extremely important	19	38	5	9	7	1
Missing	0	0	2	2	2	74
Total	83	83	83	83	83	83
Total valid	83	83	81	81	81	9
Percent valid	100%	100%	98%	98%	98%	11%
= extremely important	23%	46%	6%	11%	9%	11%
=> very important	43%	70%	11%	19%	22%	22%
=> important	63%	84%	16%	32%	35%	22%
Total, => important	52	70	13	26	28	2
Relative	27%	37%	7%	14%	15%	1%

SIII, Q15: Asking for or receiving help in a crisis situation

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	1	0	0	0	0	0
Not at all important	16	9	55	48	50	6
Somewhat important	8	6	8	11	12	0
Important	7	10	9	5	7	0
Very important	16	16	2	9	6	0
Extremely important	31	39	5	6	4	2
Missing	4	3	4	4	4	75
Total	83	83	83	83	83	83
Total valid	79	80	79	79	79	8
Percent valid	95%	96%	95%	95%	95%	10%
= extremely important	39%	49%	6%	8%	5%	25%
=> very important	59%	69%	9%	19%	13%	25%
=> important	68%	81%	20%	25%	22%	25%
Total, => important	54	65	16	20	17	2
Relative	31%	37%	9%	11%	10%	1%

SIII, Q16: Offering or giving daily or ongoing emotional support to others

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	0	0	0	0	1	2
Not at all important	10	4	46	39	39	5
Somewhat important	12	3	15	15	15	0
Important	17	17	11	10	17	0
Very important	21	16	3	8	5	1
Extremely important	22	42	4	8	4	0
Missing	1	1	4	3	2	75
Total	83	83	83	83	83	83
Total valid	82	82	79	80	81	8
Percent valid	99%	99%	95%	96%	98%	10%
= extremely important	27%	51%	5%	10%	5%	0%
=> very important	52%	71%	9%	20%	11%	13%
=> important	73%	91%	23%	33%	32%	13%
Total, => important	60	75	18	26	26	1
Relative	29%	36%	9%	13%	13%	0%

SIII, Q17: Offering or giving help to others in a crisis situation

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	1	1	3	3	3	2
Not at all important	11	8	50	41	49	6
Somewhat important	9	3	10	10	12	0
Important	8	15	7	11	6	0
Very important	24	15	4	6	5	0
Extremely important	27	38	4	8	4	1
Missing	3	3	5	4	1	74
Total	83	83	83	83	83	83
Total valid	80	80	78	79	82	9
Percent valid	96%	96%	94%	95%	95%	11%
= extremely important	34%	47%	5%	10%	5%	11%
=> very important	64%	66%	10%	18%	11%	11%
=> important	74%	85%	19%	32%	19%	11%
Total, => important	59	68	15	25	15	1
Relative	32%	37%	8%	14%	8%	1%

SIII, Q18: When you asked others for help with a small task that was not online

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	0	0	0	0	0	1
Not at all important	5	1	55	46	65	5
Somewhat important	7	9	15	22	7	0
Important	16	18	8	6	5	0
Very important	22	26	1	4	2	0
Extremely important	31	28	2	2	1	1
Missing	2	1	2	3	3	76
Total	83	83	83	83	83	83
Total valid	81	82	81	80	80	7
Percent valid	98%	99%	98%	96%	96%	8%
= extremely important	38%	34%	2%	3%	1%	14%
=> very important	65%	66%	4%	8%	4%	14%
=> important	85%	88%	14%	15%	10%	14%
Total, => important	69	72	11	12	8	1
Relative	40%	42%	6%	7%	5%	1%

SIII, Q19: When others asked you for help with a small task

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	0	0	1	1	1	1
Not at all important	5	3	61	47	66	5
Somewhat important	5	10	10	16	6	0
Important	21	22	6	10	7	0
Very important	18	18	1	6	1	0
Extremely important	34	30	2	1	0	0
Missing	0	0	2	2	2	77
Total	83	83	83	83	83	83
Total valid	83	83	81	81	81	6
Percent valid	100%	100%	98%	98%	98%	7%
= extremely important	41%	36%	2%	1%	0%	0%
=> very important	63%	58%	4%	9%	1%	0%
=> important	88%	84%	11%	21%	10%	0%
Total, => important	73	70	9	17	8	0
Relative	41%	40%	5%	10%	5%	0%

SIII, Q20: If a teacher, how important in interacing with your students

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	0	0	0	0	0	1
Not at all important	6	0	14	13	7	1
Somewhat important	5	2	5	4	8	0
Important	6	2	3	3	6	0
Very important	6	2	3	3	2	0
Extremely important	6	23	4	5	6	1
Missing	54	54	54	54	54	80
Total	83	83	83	83	83	83
Total valid	29	29	29	29	29	3
Percent valid	35%	35%	35%	35%	35%	4%
= extremely important	21%	79%	14%	21%	21%	33%
=> very important	41%	86%	24%	31%	28%	33%
=> important	62%	93%	34%	41%	48%	33%
Total, => important	18	27	10	12	14	1
Relative	22%	33%	12%	15%	17%	1%

SIII, Q21: If left home, how important interacting w those in home town

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	0	0	1	1	0	2
Not at all important	0	2	10	6	2	0
Somewhat important	1	4	2	1	4	0
Important	2	3	0	0	3	0
Very important	3	1	0	1	2	0
Extremely important	7	3	0	4	2	0
Missing	70	70	70	70	70	81
Total	83	83	83	83	83	83
Total valid	13	13	13	13	13	2
Percent valid	16%	16%	16%	16%	16%	2%
= extremely important	54%	23%	0%	31%	15%	0%
=> very important	77%	31%	0%	38%	31%	0%
=> important	92%	54%	0%	38%	54%	0%
Total, => important	12	7	0	5	7	0
Relative	39%	23%	0%	16%	23%	0%

SIII, Q22: If a student, how important interacting with fellow students

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	0	0	0	0	1	1
Not at all important	14	2	14	17	52	1
Somewhat important	16	3	19	13	8	0
Important	18	11	9	14	1	0
Very important	7	13	14	11	0	0
Extremely important	7	34	7	7	0	1
Missing	21	20	20	21	21	80
Total	83	83	83	83	83	83
Total valid	62	63	63	62	62	3
Percent valid	75%	76%	76%	75%	75%	4%
= extremely important	11%	54%	11%	11%	0%	33%
=> very important	23%	75%	33%	29%	0%	33%
=> important	52%	92%	48%	52%	2%	33%
Total, => important	32	58	30	32	1	1
Relative	21%	38%	19%	21%	1%	1%

SIII, Q23: If a student, how important in interacing with teachers

	Phone	In person	PortaCom	Online	Writing	Other
Don't know	0	0	0	0	0	1
Not at all important	15	4	24	21	40	1
Somewhat important	20	2	9	13	9	1
Important	13	8	8	7	5	0
Very important	9	18	11	13	2	0
Extremely important	6	31	11	[illegible]	[illegible]	0
Missing	20	20	20	[illegible]	[illegible]	79
Total	83	83	83	83	[illegible]	[illegible]
Total valid	63	63	63	61	[illegible]	[illegible]
Percent valid	76%	76%	76%	73%	[illegible]	[illegible]
= extremely important	10%	49%	17%	11%	[illegible]	0%
=> very important	24%	78%	35%	33%	8%	0%
=> important	44%	90%	48%	44%	17%	0%
Total, => important	28	57	30	27	10	0
Relative	18%	38%	20%	18%	7%	0%

APPENDIX III - PortaCom Conferences by Type, as of 3/10/92

This shows PortaCom private and public conferences as of March 10, 1992 belonging to one of three broad groups: I- instructional/institutional, II- technical, or II- social. Each of these is further broken down and defined. Please note that there may be disagreement among PortaCom members concerning the categories and where I have placed conferences. Also note that many conferences belong to more than one category. For example, Open Forum is social but is also used to iron out issues relating to PortaCom. Thus it belongs to category IIb as well as category IIIa. The Compuer Center Log deals with both institutional issues (category Ia) as well as technical issues (category IIb). Thus, please use this as a guide to, not a definitive assessment of, PortaCom activity.

1. Academic/institutional

1a. Educational, instructional, research-oriented, administrative:

Chemistry (Questions & Answers)
Clio Con
Physics 212
First Amendment
Ketchikan Student Issues
Ketchikan Student Notices
(UAS) Student Govt. Announcements
Online Communication
(ED 432) Electronic Democracy
Alaska Science Projects Network
Disted Dialogue
OC Papers
ED 333 (Learning Process)
(UAS) Sitka Computer Faculty
ATRN (AK Teacher Researcher Network)
(Systems Analysis + Design) CIS 350
ED 637 (Oldaker)
ED 430 (Seminar)
ED 670 (Conference)
(Rural Student) Services Network
GEO CON
ED 402
Juneau Teacher Researchers
(ED 432) Ed Journal
MEHS OA PROJECT
Innovative Assessment
COMT 493/ED 693 (Distance Education)
Center (for) Teacher Education
ED 432
LEAD (conference)
Distance Education Research Project
(ed 432) usenet
ED 673/COMT 473- Adv. Tcomm
Sitka ED 402
(Sitka) Online Services Course
(SBPA) Advisory Committee
(The Computer Center) Log
(SBPA) Tech Talk

1b. Academically or student project related, possibly but not necessarily instructional:

(A question of) Philosophy
Ed Tech Bill
(The) Holographic Paradigm
(Short) Stories
(Contemporary) Families
The Academy (philosophia)
(Towards Understanding) Islam
Education Forum
Legislation (in process)
Etymology (Rediscovering Language)
Enlightenment (Thinking)
Acting (& all that drama stuff)
(Marine Advisory Program) MAP
Myers Briggs
(Human) E-mail
SERRC Tech Comm
Sturgulewski/Carricaburu Conference
Davidson/Jacobson Conference
Jacko/Atchley Conference
Duncan/Gaffney Conference
Navarre/Browning Conference
Ulmer/Gaffney Conference
Bruckman/Nagengast Conference
Sturgulewski/DuBeau Conference
Boyer/Thieman Conference
Sturgulewski/Ower Conference
Navarre/Thiel Conference
Boyer/Thieman Conference
Student Legislative Conference

2. Technical

2a. General technical help:

(Ask) Dr. Vax
Amiga Bits
Network (Hitchhikers)
WordPerfect (Users Group)
Apple talk
Amiga Bits
Connectivity (LANs, MANs, and WANs)
Macintosh Users' Group
UNIX User's Group
IBM (Discussion and User's Group)
Programming Languages

2b. PortaCom related technical, administrative, general info:

(Description of) Public Conferences
(Description of) Private Conferences
(Presentation of) New Users
(PortaCOM) Etiquette
(PortaCOM) HelpLine
Suggestion Box

3. Social

3a. Student service, general discussion, or non-game related:

Open Forum
(Ideas and Info for) Parenting
Movie Reviews
(The) Classifieds
(Questioning Love &) Sex
Book Reviews
Comic Books (and Other Collectables)
Music (post)
Joe's Garage
(Conference of) Absurdity
(Pet) Peeves
Hoops Scoops
Under 19(club)
Current Events
Restaurant (Reviews)
G&L Forum
A-J Mine
Words of Wisdom

3b. Games or game-related:

Computer Games
(I)MORIA! (Dungeon Explorer's Ltd.)
CONQUEST (Multi-Player Star Trek)
MUD (Multi User Dungeon)

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