

Development Plan

(excerpt from the RERC proposal)

WheelchairNet will have three closely integrated components: 1.) community content, 2.) a development process, and 3.) structure and management of the host system.

1.) Community content

The first and most important aspect of any virtual community is the quality of its content. Content will attract and sustain a growing loyal membership. The community must be flexible and responsive to member needs and preferences. Based on currently existing vibrant communities, a virtual community on wheelchair technology should contain:

Information: The site would include a searchable database of wheeled mobility-related references. References might include: actual publications produced by the RERC on Wheelchair Technology (1993 to present); current wheeled-mobility-industry product performance standards and standards application guidelines; links to mobility products; alerts and warnings; information about educational opportunities; descriptions of tasks and outcomes of the RERC on Wheeled Mobility; links to other projects and programs related to wheelchair use and safety; links to WWW-based disability resources, etc.

Discussion topics: Discussion leaders will be invited to facilitate discussion groups on issues of importance to subsets of the WheelchairNet community. The topics could include safety issues, maintenance experiences, concepts for improved products, comments on draft standards, selection of the most suitable pressure relief products, locating services for children, and problems encountered transitioning from manual to powered chairs, etc.

Relationships: An important element to the growth of a virtual community is the extent to which people form personal relationships with others of similar interests. Threaded discussions, forums, and chat groups will be established to foster interpersonal exchanges. The expectation of continuing and extending these relationships will encourage members to return frequently to the virtual community. Efforts will be made to foster cross-disciplinary and consumer/ professional relationships, thereby reducing barriers that frequently arise between consumers and service providers.

Research issues: Virtual communities offer a means to include new samples of people in research activities at relatively low cost. Research topics could be related to nature of the community itself or to the advancement of wheelchair technology, services, or product standards. Pending telecommunications technology developments to increase bandwidth should allow WheelchairNet over the period of the RERC project to provide high resolution audio-visual materials, to exchange large amounts of data, and even to teleconference meetings and evaluations. These developments will allow groups of people from distant locations to participate in research enterprises unlimited by geographical distance or time. Project staff will conduct research on the characteristics of the WheelchairNet community and participant research related to the experiences of mobility device-using community members.

2.) The development process

Given the availability of a robust WWW server with appropriate software, there are essentially three phases to developing a sustainable virtual community: a) Phase I-generate traffic, b) Phase-II concentrate traffic and c) Phase-III lock in the traffic (Hagel & Armstrong, 1997).

Adequate resources already exist to generate interest and traffic related to a community centered on wheeled mobility technology. Currently, these resources are not concentrated or available on one site. Initial efforts will focus on creating links to existing web-based mobility resources, posting an existing RERC searchable database, and researching and linking to new resources. These resources are possible immediately with only minimal investment in host resources. Once developed and beta tested, awareness of WheelchairNet can be created through the use of meta-tags, registering keywords with popular search engines, and articles and announcements on the web and in print publications used by professionals and consumers.

Concentration of traffic will come in phase II through enhanced offerings like discussion groups, chat groups and additional information resources.

Phase III will focus on securing loyal members through fostering personal relationships, engaging members in research activities and tailoring community resources to individual needs. It is expected that by the end of Phase III there will at least 800-1000 community members in addition to others who use the site to get information. The development of the three phases as outlined is expected to take 3-4 years. Figure 1 below provides a graphical summary of the resources and development phases of WheelchairNet.

3.) The host structure and management

To be successful, a virtual community must be managed by persons who use and apply the latest WWW technology. Additionally, community developers must nurture the development of community relationships, respond to needs for information and services, and monitor the timeliness and accuracy of information. This support structure should be invisible to the users and should serve to create and enhance the community, based on the needs and desires of its members (Hagel & Armstrong, 1997). The host team will consist of knowledgeable graduate students, faculty, wheelchair users and other consultants, as necessary. Phase I will include securing the domain names "wheelchairnet.org, and wheelchairnet.com" establishing the WWW server platform within the network system of the University of Pittsburgh, assembling the community's initial offerings, and beta testing the site with a select group of knowledgeable constituents.

The site will be developed with accessibility to blind users in mind. We intend to use the html accessibility standards of the National Center for Accessible Media (<http://www.wgbh.org/wgbh/pages/ncam/>). We will work with the RERC on Telecommunications and the National Center on Dissemination of Rehabilitation Research to ensure use of design features that accommodate visually impaired community members.

WheelchairNet

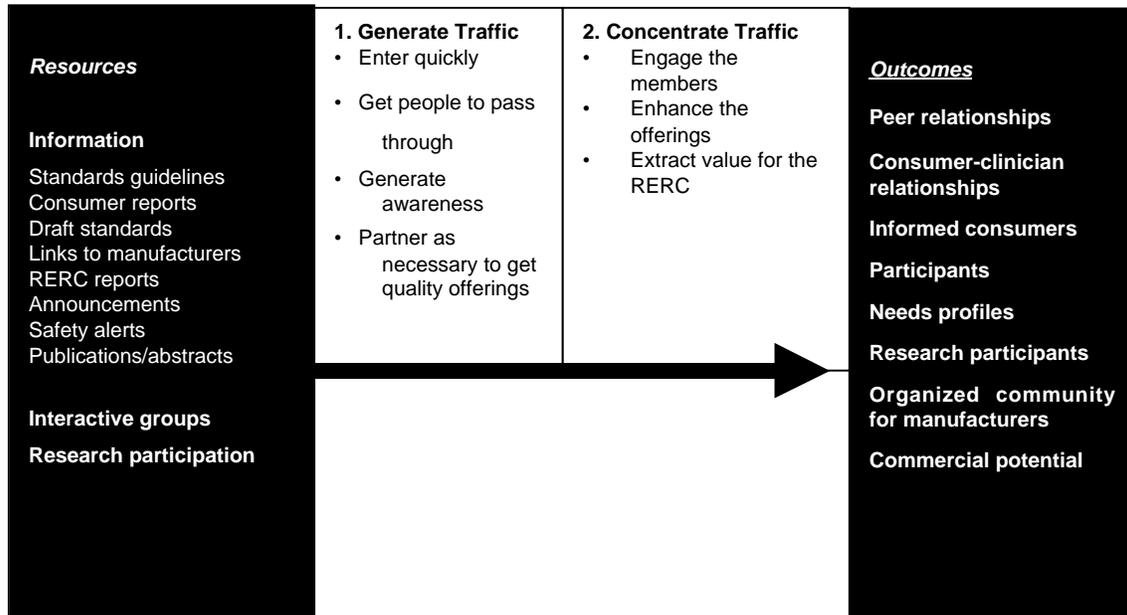


Fig. 1. Graphical summary of the proposed development phases of WheelchairNet

Sustaining WheelchairNet

Since RERC support is time limited, it is essential to lay plans for the community's transition to independence at an early stage. Two elements are important for sustaining a healthy virtual community. The first is building a loyal membership through continuous quality improvement. The second is having the financial resources to support the infrastructure and management of the community. We anticipate growth in value of the information accumulated from the members who over time are willing to share their personal needs and preferences. This information, captured systematically (with member's permission), will form a community asset that cannot be readily duplicated by others. This data will have significant market value (Hagel & Armstrong, 1997), especially 4-5 years from now when WWW commerce will be commonplace. We anticipate that mobility device manufacturers, vendors, insurance companies, travel agencies, etc. would be willing to pay for user-preference information. Revenues thus generated could be used to sustain the cost of the community's operation and ongoing enhancement independent of the RERC and federal support. Transition to independence will be the focus of the fifth year of the community's development.

Anticipated Results

To quote a noted pioneer (Rheingold, 1993) in the development of virtual communities: “The idea of a community accessible only via my computer screen sounded cold to me at first, but I learned quickly that people can feel passionately about e-mail and computer conferences. I’ve become one of them. I care about these people I met through my computer, and I care deeply about the future of the medium that enables us to assemble.”

This project could well be a model for how people in the twentieth century will learn about and communicate with others on a worldwide scale on matters related to assistive technology. A natural step from WheelchairNet, which is focused on wheeled mobility technology, is the development of a constellation of communities. Each one of these communities would be specific to an assistive technology or some other common interest topic, such as research or service delivery, much along lines of RESNA’s Special Interest Groups and Professional Service Groups. WheelchairNet will create a virtual community experience that will be documented, refined and researched over a five-year period. If successful, WheelchairNet should be a key site for anyone wanting to learn about the needs of wheelchair users. It will also be a source for those seeking to make a change in wheelchairs and wish to benefit from the experiences of others. WheelchairNet will provide a forum to discuss virtually any issue or topic related to wheelchair technology. WheelchairNet will begin the re-definition of AT information dissemination that will drastically change and evolve as we enter the next century.