Community Computing

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ABSTRACT

A community refers to a group of people that identify themselves with common interests. Community computing supports human-computer interaction among neighbors and bridges the digital divide. It is a grassroots model that seeks to empower people in marginalized communities with basic computer skills. It has become a major research area in human-computer interaction. This paper provides a brief introduction on community computing.

Key Words: Community Computing, Community Networks.

1. INTRODUCTION

A community consists of individual members and its wellbeing depends on the wellbeing of its members. It may be any organization that cares for the wellbeing of its members, such as a smart city, a police department, a church, a hospital, or a school. A community has goals and protocols. Sometimes, it is difficult to define community as technology is changing our view of what constitutes a community. The term "community" is used in various ways like online community, user community, design community, virtual community, community networks, mobile community, university community, community informatics, and community computing.

Community computing enables disadvantaged people to have computer access and learn computer skills. It is a component of the e-inclusion strategy and is designed to help to bridge the digital divide. The lack of access to information and communication technology is common in rural areas, especially in developing nations. Community computing seeks to bridge the digital divide [1]. It will become important with the advance of computer networks such as the Internet and mobile computing. It will develop basic computing skills such as email access, voice activation software, programming, Skype, surfing the Internet, etc. [2]. Such skills improve productivity and enable social interactivity among members of the community.

Community computing began with the development of the timesharing computer in the early 1960s. The term "community computing" can be regarded as the tool for creating, maintaining, and evolving social interaction in communities such as (1) finding someone to collaborate with, (2) making contact with the selected people, (3) building a common understanding, (4) collaborating with others, (5) executing individual tasks, and (6) communicating between coworkers [3]. A core issue in developing community computing infrastructures is sustainability.

2. COMMUNITY NETWORK

A community network is connected to localized social networks. Each social network is linked to some notion of community development, social change, or civic engagement. The goals of the network include helping a community use information technologies to enhance the life of the community, strengthen community, improve democracy, and increase access to information technologies [4]. A community network is greatly affected by changes in computer technology.

Community networks are usually accessible from home computers or the Internet. They take different forms in different communities. Community members interact with community networks in various ways. Community network can provide e-mail and web sites to thousands of community members. It can also be used to enhance a democratic society by facilitating social goals such as increasing access to community information, promoting civic engagement, influencing public policy decisions, supporting

independent alternative media, supporting civic associations, supporting civic assets, educating people about political issues and technology use, providing access to government, and providing access to relevant data [5].

3. CHALLENGES

In implementing community computing, some issues arise: security, privacy, intellectual property, etc. Though there have been several trials, there are yet only few full implementations of the community computing models. It is critically important that we engage in community-based work that can be sustained over time. Several community computing initiatives fail because the underlying infrastructure does not meet end user requirements and financial and human capital resource become unavailable to further maintain the infrastructure [6].

4. CONCLUSION

A community is a group of people living in a particular local area. Community computing has been proposed for facilitating both group formation and group decision making. The decision making activities consist of negotiation, idea generation, voting, knowledge share, and auction [2]. If carefully implemented, community computing can be of great help to community members and help achieve the goals of community development and greater social justice. More information about community computing can be found in book in [7].

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