In most developing countries, telecommunications infrastructure has long been low on the agenda, where other development goals have received higher priority.

As a result, the telecommunications infrastructure is often seriously underdeveloped, and the cost of using it is generally more expensive in developing countries than in developed ones.

In fact, some developing countries also lack sufficient electricity supplies, especially in rural and remote areas. Unless these problems of basic infrastructure can be solved in a practical and sustainable way, there is no point in maintaining any desire about the widespread Internet application in developing countries.

A great deal of international pressure is being place on developing countries to liberalize their telecommunications sector. The argument is that privatization and competition will result in better and cheaper services to the population. This pressure for privatization is at times even a condition for development assistance, e.g., by the World Bank and USAID.

One should, however, not lose sight of the fact that telecommunications have long been national industries in most developed countries, where they have been considered a public service rather than a profit-making enterprise. Since private telecommunications service providers are profit oriented, they will unlikely be interested in providing access to areas where there are few customers, for example, to remote and sparsely populated areas.

Furthermore, public sector telecommunication monopolies provide much-needed revenue for governments in developing countries. And it should be noted that the global telecommunications market is more characteristic of an oligopoly, dominated by a handful of companies, than of open competition.

If the Internet is to become a developing tool for serving the deprived, access by weaker social groups must be assured. This does not necessarily mean individual access. Lack of technical know-how and equipment are fundamental obstacles to Internet access in developing countries and will continue to be so in the foreseeable future. Most people in developing nations will never be able to afford their own PCs, and many countries will not be able to invest in the infrastructure or training required. Although the idea of individual connectivity should be aborted as an idealistic goal, alternatives should be explored so as not to reinforce an elite group of information haves.

Therefore, rather than focusing on individual access, we should explore the more socially beneficial community-based access, which is itself a bold goal.

To this end, the State of Qatar Transport and Communications Ministry adopted an initiative, enabling transient workers housed in accommodations associated to mega projects with Internet access through a number of programs which include: -

- access to the iParks initiative with free Internet connectivity;
- development of computer rooms in labor accommodation;
- working with employers to improve training opportunities and developing content in several languages to facilitate understanding;

Moreover, in Europe this is how wider access to the Internet is pursued, and a number of countries are establishing public access points at community centers and public libraries. Similar initiatives are taking place in a number of developing countries through, for example, local post offices or commercially run cybercafés. It is also noteworthy that innovative approaches combine modern information technologies with more traditional means of sharing information. In some cases, e-mail messages are printed out and distributed to the recipients, the Internet thus reaching people who may never even have seen a computer.

The Internet is being applied in numerous ways in specific sectors. The following examples illustrate how government and various stakeholders can promote development aspects of the Internet:

- **In Health**

    In the health sector, telemedicine provides a number of advantages for doctors and other medical staff. In some developing countries, especially, access to appropriate expertise for a precise diagnosis and the treatment of illnesses is often challenging to obtain. While this is particularly true in rural and remote areas, it applies to many urban areas as well. Computerized networks facilitate access to accurate and up-to-date information, enable long-distance training and consultation, and improve the administration of the health sector. Online initiatives addressing health and medicine, promote networking among hospitals and health professionals worldwide to provide updates on current medical research.

- **In Education**

    The beginning of the Internet is strongly connected to education, as it was in universities and research institutes where electronic networks were initially developed. Such networks have since evolved from the sharing of research findings among scientists and scholars to access to libraries, schools, and universities worldwide. Not only can one find interesting reference material and valuable resources, but increasingly one can also download books and journals, the Internet thus providing a wealth of knowledge at one's finger tips. The Internet also enables alternative teaching methods through virtual classrooms and long-distance education, thus allowing more people to receive education.

    While the Internet is in many ways a gateway to the world of learning, the state of education in today's world leaves a lot to desire. Illiteracy rates are still high in many parts of the world; for example, only one child out of two receives primary education in

some continents. While governments worldwide are scrambling to construct information superhighways, few of them seem equally willing to invest in more traditional learning methods. All over the world, both in developed and developing countries, educational systems are declining. More and more often, one finds that schools are inadequately equipped, classes are overcrowded, and teachers are not properly trained, underpaid, and overworked. With a few notable exceptions, it appears that education is one of the first sectors turned to when savings need to be made in the national budget. Yet it makes little sense to invest in information superhighways while cutting down on one of its prerequisites, namely, solid and adequate education for all

- **In Governance**

  The ease with which information can be published and disseminated on the Internet allows for more transparent and involved political structures. For many years computerized networks have been used to share information on important events, and given today's world of increasing global integration it would appear impossible to stop such information flows.

  It is also true that the very fact that information is processed, stored, and transmitted in digital form allows for greater surveillance. After all, digital transmissions leave digital trails. Although the creativity that is found among users of the Internet can limit such trailing enterprises, the issues of privacy and personal integrity require further and sensible consideration.

  The political concerns of governments will continue to influence the future expansion of the Internet, both in developed and developing world. Because of the ease with which information can travel through electronic networks, the Internet is sizably controlled in many countries. The political concerns underlying these measures are in fact related to some of the inherent contradictions of the modern world order, namely the largescale movement of people, goods, and information in contrast to political administration within the boundaries of nation states. The Internet can serve as a powerful medium for the achievement of social identification, an important aspect of any society.

  Accordingly, countries need to protect their sovereignty and nations have the right to deny content perceived as offensive or undesirable. However, although content can be controlled within a country's borders, the global nature of the Internet makes it difficult to achieve full control. Moreover, the views of a few do not always reflect those of the population at large.