Digital Divide and Afghanistan
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The digital divide and its impact on the socio-economic developmental outcomes of developing countries has in the last couple of years been a key development agenda at major international fora. It could be argued that, the problem of the digital divide is not just a technological one; in fact it is not merely an issue of a divide between ‘technological-haves’ and the ‘technological-have-nots’. The view is that the threat posed by the digital divide to developing countries is more of an economic development problem than a technological one. The deployment, exploitation and the development of information and communications technologies (ICTs) to support the process of transforming these countries and move them towards information and knowledge economy is the central question which needs to be address within the context of the digital divide. Related to this is the question of how best to broaden and enhance the effective participation of these countries in the global ICT policy.

The Government of Afghanistan recognizes that knowledge, information and communication are at the core of human progress, endeavor and well being, and therefore have a vital role in reconstruction and development of our devastated country. The dramatic increase in the volume, speed and ubiquity of information flows that has been made possible through new information and communication technologies and has already brought about profound changes in peoples' lives and is creating enormous new opportunities around the world. Afghans have to grasp this opportunity and leapfrog to the new age of information.

In the telecommunications sector, Afghanistan and our people have suffered from long years of isolation and the “digital divide” (Afghanistan has missed all the technological developments of the telecommunications/ICT sector over the last 20 years). Today, this is a major and obvious obstacle to the process of reconstruction and the restoration of public and private sector institutions and services.

Referring to the millennium goal of United Nations, Afghanistan is a country which is in need of special consideration in order to cope with the digital divide brought by the two decade of war and misery. In order to overcome the problems and issues faced by the government and the administration of the country, Afghanistan is looking forward to a positive and healthy cooperation and contribution of the international community, UN and other organizations and entities, which have achieved a major millstones in the field of ICT and have been benefiting the blessings of ICT.
Measure the divide in Afghanistan

If we want to measure the Digital Divide in Afghanistan, we can use the international standards of measuring the divide, which is based on the use of technologies. They fall into two broad categories: basic technology usage, factors that affect use, and advanced applications of technology.

- **For basic access and usage of ICT, we review the following:**
  1. Internet use
  2. Phones
  3. Number of Computers
  4. Internet Bandwidth and Speed

- **For factors which affect ICT use, we look at:**
  1. Pricing
  2. Technical training and human capital
  3. Relevance of content

- **For advanced applications of technology, we look to:**
  1. E-Commerce
  2. Industrial Information Technology

- And finally, we examine the role of ICT in the Economy.

1. For basic access and usage of ICT

- **Internet use**
  In digital divide studies, Internet usage numbers are most often cited to describe the divide. In Afghanistan internet penetration rate is 0.08. Access to the Internet is often gauged by the number of “registered online computers” -- computers with valid IP addresses on the Internet. One of the top priorities of the government of Afghanistan is to provide internet access up till small village level by 2013. Afghanistan is planning to implement IPV6 in its upcoming ICT infrastructure, which will connect almost every machine on the network to internet.

- **Telephones**
  The present penetration rate is 0.19% which is aimed to be increased to 0.5% by end of 2004. It has been forecasted that by next 5 year 4 out of 100 Afghans will have telephone.

- **Computers**
  Basic access to computers is usually measured against the total number of computers in a country. In Afghanistan 0.13 out of 100 people had a computer in 2002 which is increased to 0.7 out of 100 people by the end of 2003.

- **Bandwidth and Speed**
  International bandwidth, including submarine and other international cables and satellite links, is an important but often ignored factor in most digital divide reports. The amount of bandwidth a country has, tells how much information can quickly travel from one country to another the calculated bandwidth in Afghanistan to the international world is approximately 50 mbps.
2. Factors affecting ICT use

- Prices
  Two basic disparities exist in the affordability of ICT -- in the basic cost of the technology, and in the cost of the technology relative to per capita income. The majority of people in developing countries cannot afford the technology, even when it is available, so usage remains low: "Poverty remains the greatest barrier to Internet growth".

  The registration of country specific domains (i.e. '.pk', '.af') is largely controlled by monopolies, and prices vary widely from country to country. In Afghanistan Ministry of Communications has raised Telecom Development Fund, which will be used to expand the telecom infrastructure to rural areas where the private sector is not willing to go. The telecom service providers are contributing 2.5% of their net profit to this fund.

  The cctld in Afghanistan is controlled by the AfgNic and is open to the private sector to resell, the tariffs for foreigners and Afghans are different, which enable Afghans to buy and use the .af widely.

- Access Speed, Cost, and Web Surfing
  In nearly all developing countries and developed countries, phone calls are charged by the minute, and are often extremely expensive. When people in these countries use dial-up connections to reach the Internet, they must then pay access fees as well as these phone charges. Since the speed of their Internet connections is relatively slow, it takes longer to download email and web pages -- which means it is more expensive, and fewer people can participate.

  Additionally, web pages (and email) are becoming increasingly graphic-heavy and "large" in terms of file size. For the United States and Europe, with steadily increasing bandwidth, this is not a problem. For other countries it means that, all other things remaining equal, it can actually become more expensive to use the Internet over time.

- Technical Training and Human Capital
  The Human resource is one of the factors, which greatly affect the use of ICT, in Afghanistan this is a very critical issue and government is addressing this issue through both government and private run projects.
• **Relevance of Content**
From the beginning of the Internet, the English language has predominated, despite the underlying and increasing diversity of its users. Just over 50 percent of all Internet users are native English speakers. Yet, "seventy-eight percent of all websites are currently in English, while 96 percent of e-commerce sites are in English....Over the last decade U.S. users and English language content have defined the Internet as a U.S.-centric environment" (US Internet Council).

The dominance of English, and especially US content, makes it less useful to other countries. Additionally, non-English countries produce less local content making the Internet less relevant to their lives, and less of a tool of self-expression and local communication. Afghanistan government has also sensed the need of this issue and has initiated a project for the UNICODE of official languages of the country, which will enable the development of the local content which will contribute to the usage of the ICT in the country and reducing the digital gap.

3. **For advanced applications of technology**

• **E-Commerce**
Electronic commerce is the advance stage of the ICT use. In Afghanistan the use of this E is not common, but there are certain afghan owned online services, which provide facility to buy and sell afghan handicrafts.

Comparing Afghanistan with the neighboring countries there is significant difference. Countries like Pakistan and India has well defined number of online services both owned by the government, public and private sector. Ministry of Commerce and Communications of Afghanistan will start a joint project to establish the Electronic Certification Authority and develop the E-Legislation and the Government portal project will be linked to this project in order to start the E-Services.

• **Industrial Information Technology**
For Industrial Information technologies such as CAD, CAM, and Numerically Controlled Machinery, the data is sparse, but points to a similar divide. In Afghanistan use of ICT in sectors like agriculture or waste management and such other segments is almost nil.

Realistically, the larger divisions for advanced ICT applications are to be expected. For example, without considerable infrastructure, access, training, and resources to develop and administer e-commerce websites, significant e-
commerce is simply impossible. And, without knowing English, most people cannot participate in e-commerce, since "English is, overwhelmingly, the language of e-commerce" and almost 94% of pages pointing to secure servers (sites capable of doing e-commerce) are in English.

4. ICT in the Economy

ICT can increase the productivity of existing industries and create high-paying and new employment in a local ICT sector. This sector can generate good revenues; facilitate the direct investment by the private sector in the country. In Afghanistan government is working on relaxed laws and regulations, which is targeting the private sector both the international companies and the afghan expatriates to invest in the ICT sector in Afghanistan.

Afghanistan is a country, which has very weak economy can make use of the ICT sector as a very smart income source for the country, looking at the neighboring countries like India and Pakistan, which has Software Export market of millions of dollars.

There is a strong need of efforts not only from the government sector but from the public and private sector to contribute to the growth and usage of the ICT in Afghanistan and start and plane projects and strategies, which should address all the above mentioned areas; by doing so we will be able to reduce this digital gap, which is brought in by the almost three decades of war and disorder in the country.