

# HELPING BRIDGE THE DIGITAL DIVIDE: SOLUTIONS FOR TECHNOLOGICAL DEPRIVATION, AFFORDABLE CONNECTIVITY AND ACQUIRING NEEDED COMPUTER SKILLS

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## **Abstract**

Ten years into the Twenty-first century and we still have a large segment of our population that either lacks even basic technological hardware, internet connectivity, the skill set or any combination of the above. Each individual item a valid issue within itself but all intertwined into the overall picture that separates those having not from those that have. The very “gap” this paper addresses. Citing the continuing trend in the business world, the educational sector and branches of government, towards more online interaction and data exchange, viewed primarily from the view of the under privileged and disadvantaged but in reality affecting everyone, this paper examines the need for viable equipment, affordable connectivity and the basic skills necessary citing examples involving real people. Several solutions for each component of the problem are offered and each of us is encouraged to become part of the solution for helping bridge the digital divide.

## The Problem

A young lady comes home from school in Minot North Dakota with the mandate from her teacher that involves doing some research tonight on the internet. When she expresses to the teacher in front of the class that she does not have internet access at home she finds herself the focus of ridicule, not from the instructor but from her fellow students! The instructor settles the class down and assures the young lady that certainly she has options... She could stay after school and use the internet from one of our labs, so long as she can finish up in the 40 minutes allotted before she has to leave the school. She could go to the public library and use their internet, provided she can get there before they close for the night. She could also get internet from one of the many public access internet locations but then this would require her to have a computer and one that is portable to be exact not to mention that she would need to be portable too. Unfortunately she is unable to stay after school, she must get home to be there waiting for her little sister to arrive from school. Along the same lines she is unable to visit the local public library before they close due to having to care for her little sister while their mother rests before having to go work for the evening. The next day she finds herself in school and reluctantly having to admit to her instructor that she was unable to complete the assignment, especially knowing that she will likely be the victim of further ridicule.

A middle aged man finds himself unemployed and stops into a local Job Service office to file a claim for unemployment compensation. He meets with a Job Insurance Claims representative that is very friendly who tells him, "Filing your weekly claims is a whole lot easier now because it's all done online." The man looking somewhat confused asks, "You mean we don't mail in our claim anymore? That is how I did it the last time I had to file." The representative says, "Oh no everything is done on our website now, making it much more convenient." Then the man feeling somewhat frightened says, "I don't have internet at home, or a computer for that matter!" He is reassured by the representative that he can come into the local office and use the computers to file. To which the man replies, "So each time I need to file I can come in here and use your computers to file my claim? And this is more convenient?"

An elderly gentleman hangs up the phone frustrated from what he just heard and is asked by his granddaughter, "What's wrong grandpa?" "Oh I was trying to get a hold of a human at the Social Security office and I get so tired of them always saying how you can go to their website for faster answers to your questions. Well I can't do that if I don't have internet or a computer now can I!" he exclaims in a heated statement. His granddaughter with a puzzled look on her face and a knack for over simplifying things, says "Well grandpa, why don't you just get internet?"

According to the National Telecommunications and Information Administration, citing the latest Census Bureau data provided in the Current Population Survey reports, out of 119,545,000 households responding, 23,638,000 (19.77%) have no internet (Households).

The following table of data compiled from the National Telecommunications and Information Administration shows the correlation between income and internet accessibility. As one would expect the lower income brackets are almost at the 50% mark.

<b>Household INCOME</b>	<b>No Inet</b>	<b>% of Total</b>
Under \$5,000	1,171,000	35.08%
5,000-9,999	2,277,000	46.30%
10,000-14,999	3,124,000	43.92%
15,000-19,999	1,809,000	36.35%
20,000-24,999	1,927,000	31.39%
25,000-34,999	2,874,000	24.01%
35,000-49,999	1,718,000	12.89%
50,000-74,999	1,064,000	6.49%
75,000-99,999	272,000	2.78%

Table 1: Household Income/No Internet breakdown.

## **The Solutions**

This paper proposes solutions for addressing the three main components that comprise the overall problem:

1. Hardware Needed –
  - a. Donation of old hardware from businesses and individuals.
  - b. Recycling, Refurbishing and Reconditioning systems.
  - c. Getting them to the people – Social Services, Community Action, etc.
2. Affordable connectivity –
  - a. Link Up America – Getting those most in need hooked up.
  - b. Advertising funded or sponsor subsidized connectivity.
  - c. Public Access wireless.
3. Advancing the Learning Curve – Computer and Internet Usage 101
  - a. Community Service Instruction.
  - b. College and University contribution and community involvement.
    - i. Tutoring / Instructional Provision.
    - ii. System Refurbishing and Reconditioning.

## **Hardware Needed**

In the past working with a gentleman named Harold McGowen we decided to build computers for the college we were working for, as a means of saving money. It was not long before we realized a three to one deployment advantage over other institutions that were purchasing machines pre-assembled computers. We also implemented a plan to refurbish older machines and give them to needy students. In a two year period of time we gave away nearly two dozen viable computers to welcoming homes. These machines went to homes that otherwise would not be able to afford computers on their own.

## **Recycling**

Colleges and universities seem like the logical place to perform refurbishing and reconditioning of computers for helping to connect the needy. I would highly encourage Department Chairs and Academic Deans to adopt community service components into their existing computer science programs. Even a contribution of 10 hours over the course of a four year program would greatly benefit the overall good. The community service component could come in one of several ways; teaching basic computer and internet usage skills, or system reconditioning and refurbishing.

I am personally involved with a grant and donation funded program through my local church that aims to put computers into the hands of needy sixth graders. My involvement consists of instruction, procurement, grant writing and application review. Even though this program is in its infancy, I am confident that it will be very well received.

## **Distribution Channels**

The logical place to reach those most in need of assistance is through Community Action or Social Service programs. Public school systems and churches can also be instrumental in pinpointed need within the community.

## **Affordable Connectivity**

### **Link-Up America**

Much like the social services program designed to get affordable telephone connectivity into the hands of the poverty stricken I feel the time has come for a program that helps the cost of internet into a more reasonably priced range. In this day and age access to the Internet has become almost as important if not more important than simple telephone service. The Internet arguably is a critical and necessary tool for virtually any and every one.

### **Advertising funded**

Advertising funded or commercially sponsored Internet provision is an idea that has already proven it works. Synonymous with advertising rich broadcast television, Internet providers such as Net-Zero gained their claim to fame by first offering free internet but at the cost of having to deal with adverting on your desktop.

In a commercially driven society such as ours, this seems like a logical way for advertisers to get their message in front of their would-be buyers.

## **Public Access Wireless**

Public access internet may seem like a radical idea, but some of the more upbeat restaurants are offering it, along with almost all hotels these days, most boasting it as a fringe benefit of doing business with them. I worked on a proposal to provide wireless internet to an entire community. The plan was a viable one even if a bit grandiose. Had the proposal been approved it would have provided Internet access to those that otherwise would only have had dialup access at best.

## **Advancing the Learning Curve**

As I mentioned early in the “Hardware Needed” section Universities and Colleges could play a critical role in the overall solution to this problem with the inclusion of a community service component in their existing curriculum. Community service classes could be offered enabling attendees the opportunity to gain basic computer and internet usage skills. The skills they need to allow for day to day functionality in this day and age.

Governmental agencies such as Job Service have implemented computer usage and instruction classes aimed at helping their clients more effectively utilize their technologically based services. Other agencies have published pamphlets and brochures focused on giving their clients the knowledgebase necessary to interface their services electronically. For those needing immediate help, the nearest available representative finds themselves becoming the tutor, in order to properly assist the person needing help. That person could be you having to provide that direction and guidance one day.

## **All in All**

We can not ignore any one of these possible avenues in our pursuit to help bring the rest of humanity into the digital fold. You may say to yourself, “What can I do, I am only one person.” Just remember, each and every one of you can make an impact on the world around you even with something so simple as taking that old pc out of the closet and helping bring someone into the 21<sup>st</sup> century.

## References

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