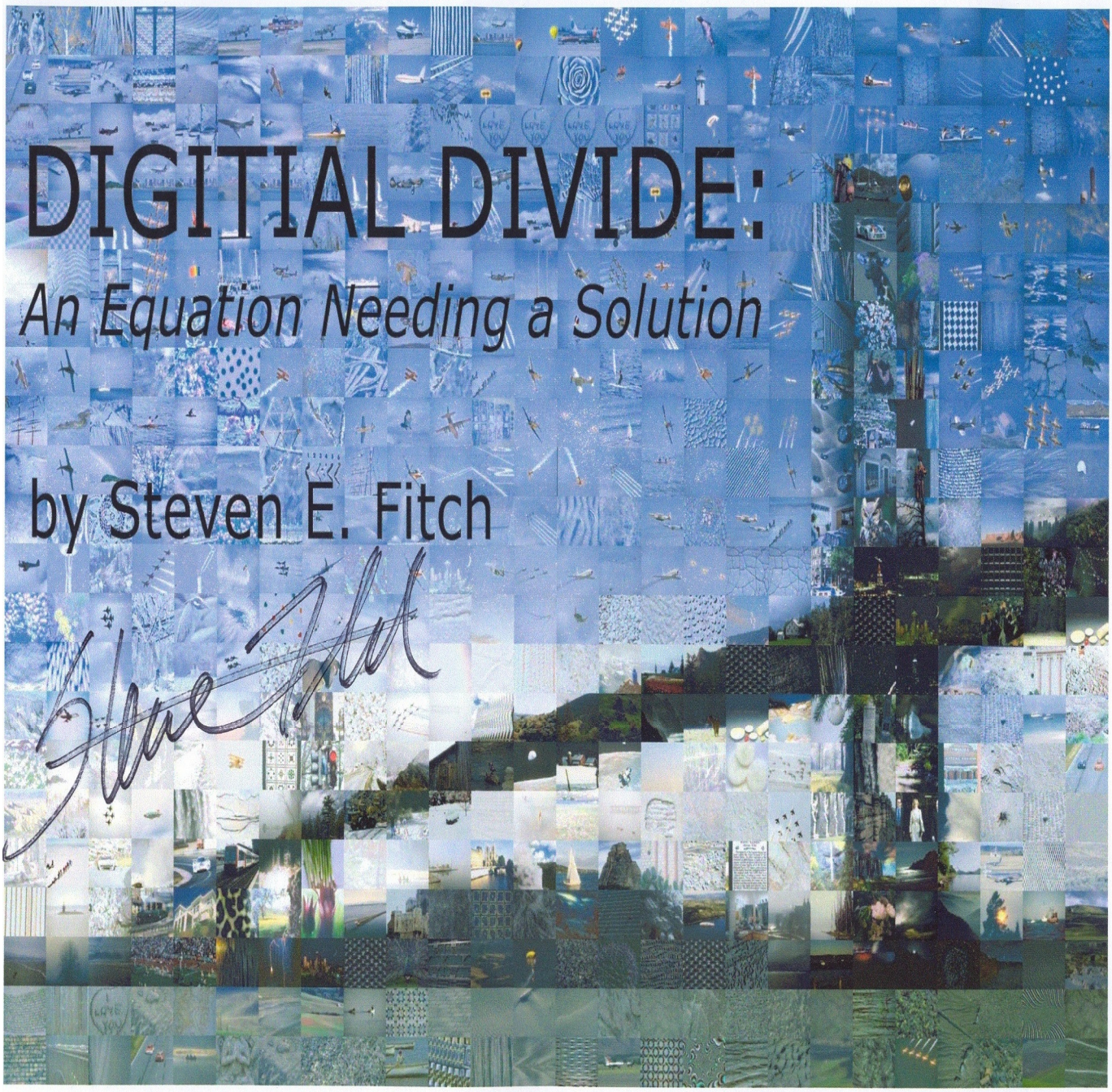
DIGITIAL DIVIDE:
An Equation Needing a Solution
by Steven E. Fitch

D i g i t a l D i v i d e

An Equation Needing a Solution

by

Steven E. Fitch MBA

FIRST EDITION

Designed by Steven E. Fitch MBA

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I owe more than I can express to the thoughtful and unwavering support of my wife, Cynthia Fitch CPA. Our relationship is a proposition of loving that has lasted a good mark of time and has defied a description on one page, so I won't start here. At this time, I will say thanks – thanks for your patience and putting up with me, and just accepting me with **all** of my flaws.

To my daughter, Jazmine Lanee', thank you for just being you – your love and energy kept my spirits high especially through the tough days. As you grow, always remember, *"keep being you!"*

And finally, I also wish to thank my entire family and friends for the constant encouragement extended to me over the years.

From my first-book experience, I have learned so much. Mainly, no one person writes a book. The understanding, compassion, encouragement and love of others are essential to be successful in anything.

Oh, that my words were written! Oh that they were printed in a book. ~ JOB 19:23

In memory of Seth E. Fitch Jr.

November 29, 1930 – November 1, 2006

INTRODUCTION

"Man cannot discover new oceans, until he has the courage to lose sight of the shore."

I started writing this first as an article while in graduate school, as an external tool for minority students who are considering studying Information Technology (*IT*). Well, the article has come full-circle. This piece of writing was totally different to me. I submitted a complete article on the subject, but towards the end of the assignment, I realized that I had more to share. So with my work and social schedule, I put this document on hold until I could really *re-dedicate* myself. Recently, I had an *epiphany* to buckle down and compile all the information that I wish I had as a student, and well, as it goes, the rest is *my-story*.

About the Author

I began my career more than *sixteen* years ago in the *Information Systems Technology* industry as a database administrator at a Fortune 1000 company. That is where I learned the *ins and outs* of technology and all it had to offer. I was introduced to a number of career paths, such as desktop support (helpdesk), programming, documentation (technical writing) and local area network (LAN) environments, as well as the Internet to name a few.

Fortune 500 list

http://money.cnn.com/magazines/fortune/fortune500/full_list/

In a world of constant changing technology and business strategies, I recognized and understood, early on, that *Information Technology* decisions must be based upon individual needs and goals - especially entities who have limited resources. In order for me to obtain my personal goals, I had to affiliated myself with a select group of successful information systems' professionals who specialize in many different platforms, such as *design and implementation of hardware, software development, internet design and security, technical writing, network operating systems design, and support*, as well as other business industry professionals, such as *accounting, legal, marketing, real estate, retail, etc…* This diverse affiliation currently allows me to create an environment rich with the elements required to successfully meet today's business requirements, while planning for tomorrow's unforeseen advances. In addition, I hope to use my education, experience and expertise to provide a refreshing, yet candid, point of view for individuals and small businesses via my writings and case studies.

At the time of this writing, I have developed and compiled a number of ***FREE*** articles surrounding home PC users, small business owners, as well as student's use of technology and various business entities. The ***FREE*** articles I have developed are published and distributed quarterly as an e-newsletter, ***xChange***™, which has over *hundreds* of subscribers.

xChange™

http://stevenefitch.com/news.htm

On a personal note, I have my Master's in Business Administration from Keller Graduate School of Management (Chicago – http://keller.edu), a Bachelor's degree in Computer Science from Chicago State University (http://csu.edu) and a number of awards, certifications and other credentials.

To read more about my background, feel free to visit my web site at http://www.stevenefitch.com/bio.htm.

FOUR EASY STEPS TO PROTECT YOUR WINDOWS PC AND YOURSELF:

1. Update Your Operating System

No software is perfect. Unfortunately, when it comes to operating systems, there are security vulnerabilities that can be exploited. The good news: updating your operating system is relatively easy to accomplish.

For example, to update Microsoft® Windows™ operating system, either (1) go to http://windowsupdate.microsoft.com or (2) go to Internet Explorer™, click on "tools," then click on "Windows update" and follow the instructions. You should update Web browsers, such as Internet Explorer, as well.

2. Install & Update Virus Protection Software

With the prevalence of computer viruses, having virus protection on your machine is a MUST. Some virus protection software's offer automatic update, but only if you have a full-time Internet connection (DSL or cable). If you don't have full-time Internet or your virus protection software does not automatically update, then you need to update by following the software manufacturer's instructions.

3. Install & Update Spyware Protection Software

Spyware/adware exploit holes in browser security and install unwanted software on your computer that over time can slow down your computer. While most of these intrusions are just nuisances, many are actually gathering information on your Internet habits and transmitting it to a third party. A Web user is left with few options. Either you increase browser security settings and severely limit your use of the Internet or obtain a spyware protection program, such as "Spybot: Search and Destroy." For many reasons, obtaining a spyware program is a better idea. You might want to try using one of the alternate browsers (like FireFox--http://www.mozilla.org) as they are not as frequently targeted by spyware.

4. Install a Personal Firewall

Most hacking dangers come from scripts run by individuals searching for a specific set of criteria--usually open ports on random computers that they can use later to launch attacks. The danger is magnified by computer users with DSL/cable or other "always on" connections, especially if they leave their computer on all the time. A personal firewall will help protect you. In most cases, a firewall will also allow the user to dictate which programs can and cannot access the Web.

The sad fact is that the more we use computers and the Internet, the more ways are going to be found for them to be used against us. The best way to fight back is to educate yourself and set up good computer protection habits. Update your operating system and your Internet browsers regularly. Add virus and spyware protection and be vigilant about keeping them updated. Add a firewall, especially if you use an "always on" connection.

Finally, if you use the Internet and have difficulty dealing with these four steps, I suggest you seek advice from family or friends because these *four* steps are crucial to safeguarding your computer from intrusions.

Chapter 4: Educational Divide

In the space program, I've had the opportunity to learn about a number of different fields, to be involved in technology that's right on the edge, pushing to see where it can go. ~ Mae C. Jemison

Technology is making a significant, positive impact on education. Highlights of these findings are as follows:

- *Educational technology has demonstrated a significant positive effect on society. Positive effects have been found for all major subject areas, from preschool to higher education, and for both regular education and special needs students. Evidence suggests that interactive video is especially effective when the skills and concepts to be learned have a visual component and when the software incorporates a research-based instructional design. Use of online telecommunications for collaboration across classrooms in different geographic locations has also been show to improve academic skills.*
- *Educational technology has also been found to have positive effects on student attitudes toward learning and on student self-concept. Students felt more successful in school were more motivated to learn and have increased self-confidence and self-esteem when using computer-based instruction. This was particularly true when the technology allowed learners to control their own learning.*
- *The specific student population, the software design, the teacher's role, how the students are grouped, and the level of student access to the technology influence the level of effectiveness of educational technology. Furthermore, students trained in collaborative learning had higher self-esteem and student achievement.*
- *Introducing technology into the learning environment has been shown to make learning more student-centered, to encourage cooperative learning, and to stimulate increased teacher/student interaction.*
- *Positive changes in the learning environment brought about by technology are more evolutionary than revolutionary. These changes occur over a period of years, as teachers become more experienced with technology. In addition, courses for which computer-based networks were use increased student-student and student-teacher interaction, increased student-teacher interaction with lower-performing students, and did not decrease the traditional forms of communication used. Many students who seldom participate in face-to-face class discussion become more active participants online. Furthermore, research has shown that greater student cooperation and sharing and helping behaviors occurred when students used computer-based learning that had students compete against the computer rather than against each other.*

Chapter 5: Solving the Divide

Technology presumes there's just one right way to do things. . . ~ Robert M. Pirsig

In order to resolve the ***digital divide,*** we must look at all aspects of it. Thus, a *one solution fits all* approach isn't the answer. What may be good in Chicago and New York, may not work in Dallas or Los Angeles (and vice-versa). But as a whole, we must first recognize and agree that there is a gap between the *haves* and the *have-nots*, and attempt to break down the barriers to eliminate the gap.

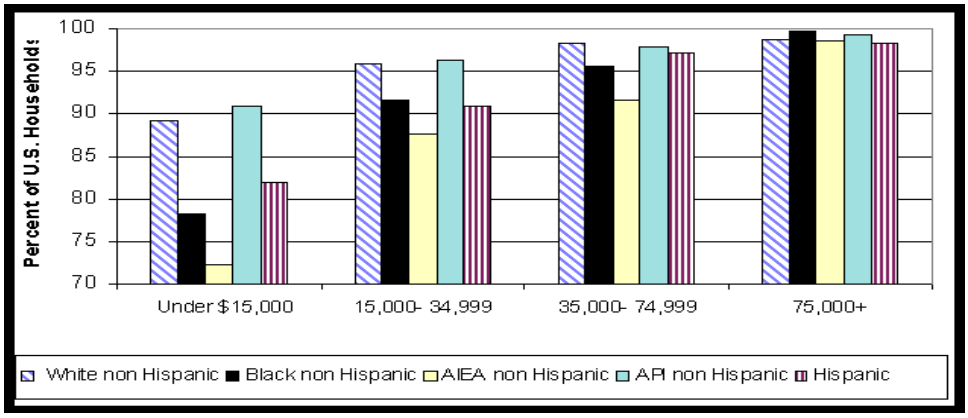
Training and education are very important parts of the effort to close the ***digital divide***. As previously stated, community access centers (CACs) -- such as schools, libraries, and other public access points – have played an important role. In the late nineties, data demonstrated that CACs are particularly well used by those groups who lack access at home or at work. These same groups, such as those with lower incomes and education levels, certain minorities, and the unemployed, are also using the Internet at higher rates to search for jobs or take courses. Providing public access to the Internet will help these groups advance economically, as well as provide them the technical skills to compete professionally in today's digital economy. Establishing and supporting these CACs, will also help ensure that all Americans can access new technologies. In the Information Age, access to computers and the Internet is becoming increasingly vital. It is in everyone's interest to ensure that no American is left behind.

The following examples highlight the breadth of the ***digital divide*** today:

- *Those with a college degree are more than eight times as likely to have a computer at home, and nearly sixteen times as likely to have home Internet access, as those with an elementary school education.*
- *A high-income household in an urban area is more than twenty times as likely as a rural, low-income household to have Internet access.*
- *A child in a low-income White family is three times as likely to have Internet access as a child in a comparable Black family, and four times as likely to have access as children in a comparable Hispanic household.*
- *A wealthy household of Asian/Pacific Islander descent is nearly thirteen times as likely to own a computer as a poor Black household, and nearly thirty-four times as likely to have Internet access.*
- *Finally, a child in a dual-parent White household is nearly twice as likely to have Internet access as a child in a White single-parent household; while a child in a dual-parent Black family is almost four times as likely to have access as a child in a single-parent Black household.*

The above data reveals that the ***digital divide*** -- the disparities in access to telephones, personal computers (PCs), and the Internet across certain demographic groups -- still exists and, in many cases, has *widened significantly*. The gap for computers and Internet access has generally grown larger by categories of education, income, and race.

The disparity based on race/origin is affected by income level. At the highest income level ($75,000 or higher), there is virtually no difference *among household penetration rates (see chart below). At the lowest income level (less than $15,000) the disparities are pronounced: American Indians/Eskimos/Aleuts (72.3%), Blacks (78.1%), and Hispanics (81.9%) have the lowest penetration rates, compared to Asians/Pacific Islanders (90.9%) and Whites (89.1%).*



Type of occupations (employment)

There are *thousands* of computer-related jobs available today. And many more are being created almost everyday. Here is a short list of occupations:

NOTE: *asterisk represents that this occupation is very demanding in the industry as of 2005.

- *3D Animation / Graphic Design*
- *Architecture*
- *Business information systems*
- **Computer forensics*
- **Consulting / Project Manager*
- **Contingency Planning / Disaster Recovery*
- *Data processing / Data Entry*
- *Engineering*
- *Mainframe Systems Support*
- **Networks: Local Area Networks (LANs), Wide Area Networks (WANs)*
- **Programming systems development / Analysis / Database Development and Administration*
- **Quality Assurance (QA) / System Analyst / Technical Auditor / Tester*
- *Sales*
- **Security*
- **Support Services (Security, Policy, Help Desk, Training. etc.)*
- *Technical Writing*
- **Telecommunications (VOIP)*
- *Training*
- *Web Design / Support / e-Commerce*

http://jobsearchtech.about.com/od/computerjob13

http://monster.com