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PREFACE

GIVING COMES NATURALLY TO MOST OF US, but social entrepreneurs want to give in a way that makes a lasting impact on society. After creating the backbone of the Internet, my company decided to help young people around the world tap into the collaborative power of networking. Advanced Network and Services (ANS) has spent more than \$128 million introducing students and researchers around the world to the magic of computers and online learning, and investments made by our partners in support of ANS took that number beyond \$600 million. For the past twenty years, we've been in the business of both creating new technology and changing lives.

As founder and CEO, I have led this company through three incarnations. I have written this book to share that exciting history with you. Part One tells how ANS and its partners drove the high-tech revolution in much the same way Lockheed Martin propelled us into space. It describes the unusual business model—working with universities, research labs, government agencies, and corporations—that enabled ANS to design and operate in record time the world's largest and fastest part of the Internet—and to keep up with its phenomenal growth. We set ANS up as a nonprofit organization, and we funneled in excess of \$60 million of our revenues back into the infrastructure, improving the service for all.

Today this same approach can help us deal with other critical issues like energy independence, education, and health-care reform. As this book illustrates, corporations and public institutions don't have to work at cross-purposes, each group focusing on its short-term profits. Together they can work on long-term goals.

Part Two relates how ANS introduced a new generation to the magic of technology. In 1995, we entered the realm of education and began to introduce students of all ages and nationalities to the magic of computers and the Internet by launching ThinkQuest, an educational Olympics on the World Wide Web. This global contest encouraged kids to create their own websites, and it became the largest and fastest-growing educational initiative on the Internet. During its fourth year, ThinkQuest drew participants from 120 countries. With its generous awards and scholarships, it encouraged more students to enter science and technology. We showed how nonprofits could change our schools, working from the outside in, to impart twenty-first-century learning skills.

Although the United States jump-started the high-tech revolution, other countries have caught up quickly. Students in Finland, Singapore, and Belgium, for example, have surpassed American students in math, engineering, and science.¹ A recent National Academy of Sciences report to Congress, *Rising Above the Gathering Storm*, warns that our general competency in these areas has declined in the past few years. The authors of that report urge policy makers to find new ways to bolster American competitiveness.² To do that, we have to be sure that every student has access to technology. Computer literacy is no longer a luxury; it is a national priority.

Part Three answers the tantalizing question, How will technology transform learning in the future? Imagine a small area in your home called a telecubicle that engages all the senses and allows you to interact with colleagues at a distance. This three-dimensional space, combining virtual reality and real life, provides a learning platform akin to the holodeck in *Star Trek*. ANS led and funded the national

initiative to develop sophisticated computer applications that allow us to simulate any environment we choose and then actually step into the frame and interact with it. Soon schoolchildren will be able to walk inside a computer model of a hydrogen atom and literally feel the force that holds its molecules together. The telecubicle is about to make the learning process more visceral and intuitive and enhance our ability to collaborate online.

Part Four of this book explores our philanthropic mission: closing the digital divide and bringing the benefits of technology to all. By the year 2000, there was a worrisome gap between the technologically privileged and the technologically destitute. So ANS began looking for ways to promote computer literacy in our inner cities. In 2004, we became social entrepreneurs, helping low-income youth find high-tech jobs and offering them incentives to start their own businesses. Instead of accepting proposals, ANS identified worthy organizations and then began to mentor them, using its contacts and business expertise instead of simply writing checks. We created a new set of rules for sustainable giving and got these organizations on the path to self-reliance in an amazingly short period of time.

ANS managed to change the lives of hundreds of thousands of young people around the world, thus getting the largest possible return for our investment. The lessons we have learned will help government agencies and other nonprofits leverage their assets and allocate them wisely in challenging economic times. We present three case studies that show how to help bring organizations to national prominence for an investment of less than \$1 million.

As innovators in the realm of technology and social change, ANS staff have other important messages to deliver. First, we have discovered that partnerships between the public and private sectors can foster innovation and get big ideas to the marketplace faster than any other business model. Second, we believe that this country can remain a player in the global economy by focusing on education, teamwork, and problem solving. Third, we have shown that the United States

can stem the rising tide of poverty by training young people in computer skills and entrepreneurship. We hope this book will become a manual for policy makers, educators, and nonprofit organizations that wish to invest in our country's future.

Part Five of this book tells why ANS made the decision not to create a self-perpetuating foundation but to go for broke and give all of our assets away. This section contains tips that will be useful to everyone from government policy makers to CEOs to community volunteers.

IBM chairman Louis Gerstner once observed that computers are magnificent problem-solving tools, but they can't replace compassion, love, and understanding. The ANS story is important because it also shows how we can build a bridge between our latest advances in technology and the dreams and aspirations of the human heart.

Allan Weis
Sarasota, Florida
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