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Digital Divide - Memos [1]

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September 20, 2000

**TOUR OF THE ASSISTIVE TECHNOLOGY ACCESS CENTER
OF THE "DISABILITY NETWORK"**

DATE:	September 21, 2000
TIME:	12:55 p.m. – 1:55 p.m.
LOCATION:	Assistive Technology Access Center of the Disability Network, Flint, Michigan
FROM:	Gene Sperling, Beth Cahill

I. PURPOSE

You will observe a demonstration of cutting edge technology that helps people with disabilities, highlighting the importance of bridging the digital divide.

II. BACKGROUND

The Disability Network is a nonprofit, nonresidential center designed to help people with disabilities lead more independent, rewarding lives. Services include independent living skills training, information about and referral to housing, transportation and educational programs, and peer and family support and guidance. The Disability Network is staffed and managed by people with disabilities.

You will participate in the grand opening of the Disability Network's new Assistive Technology Access Center, a collaboration with Flint's Mott Community College (where you will give a speech later in the day) and the US Department of Education's Community Technology Centers program, one of your digital divide initiatives. The new center aims to help bridge the digital divide for people with disabilities by teaching clients to use state-of-the-art assistive technology. I

The center will offer a newly developed Assistive Technology certification program, not available anywhere else in the United States. To teach the courses, the Disability Network will hire individuals with disabilities and train them to become certified assistive technology experts to meet the growing demand for such specialists in the workplace and classroom. Instructors will also teach design of websites that are accessible to users with audial, visual or movement disabilities.

The technologies demonstrated for you today include:

- **EyeGaze**, by LC Technologies, a communication and control system for people with complex physical disabilities, such as Lou Gehrig's disease. As a user sits in front of the EyeGaze monitor, a video camera mounted below the computer observes one of the user's eyes. The EyeGaze software continually analyzes the video image of the eye and determines where the user is looking on the screen. By looking at control keys displayed on the screen, a person can synthesize speech, control the environment (lights, appliances, etc.), operate a telephone, run a computer, or access the internet. This technology will be demonstrated by Nancy Cleveland of LC Technologies.
- **Jaws for Windows (JFW)** is a screen reader that speaks everything on the computer screen for a person who is blind. It can read everything from web pages and email to Excel spread sheets. The user can also read the screen on a refreshable Braille pad. This technology will be demonstrated by Sharon Regal of the Visually Impaired Center in Flint and Luke Zelly of the Disability Network.
- **Electronic Books (DAISY)**, from the American Foundation for the Blind and Time-Warner. Readers can see the text of the book displayed on screen (or in Braille) fully synchronized with a narrated recording; use next-generation web technologies to surf directly to any page, chapter, index entry, topic, or subsection in the book; and annotate the text with his own bookmarks and study notes. This technology helps people who are sight- or hearing-impaired. It can also help the illiterate or those trying to learn a new language in that they can hear the text on the screen. This technology will be demonstrated by Janina Sajka of the American Federation for the Blind.
- **Distance-learning.** The Access Center is also linked to Mott Community College's (MCC) main campus for tutorials and distance-learning opportunities through the Internet and video conferencing. As ever more colleges and universities offer distance-learning, clients at the center will have at their fingertips a universe of higher-educational courses from which to choose. The specific technology you will observe today is a product of the Web Accessibility Initiative (WAI) and WGBH's National Center for Accessible Media (NCAM). Accessibility features developed by NCAM and WAI include captioning of audio for people who are deaf and hard of hearing, description of video for people who are blind or who have low vision, and Web design that makes navigation easier for people with physical or cognitive disabilities. For example, NCAM has partnered with MIT to create the MIT PIVOT Project (Physics Interactive Video On-Line Tutor), which makes an introductory physics class accessible on-line by using captions and video descriptions. This technology will be demonstrated by Judy Brewer, Director of the Web Accessibility Initiative.

The Disability Network is not the only reason why Flint is known as a city accessible to people with disabilities. Flint's Mayor Woodrow Stanley, who will be on hand, recently created a city-wide Access Council to educate the community and employers on the advantages of hiring and serving citizens with disabilities; honor with a large "Access Flint" decal businesses that hire, service and are accessible to individuals with disabilities; ensure vigorous enforcement of disability-related building codes; and create a resource directory and website of local services for people with disabilities.

III. PARTICIPANTS

Pre-Event Briefing Aboard AF1:

- Sec. Norman Mineta
- Maria Echaveste
- Gene Sperling
- Mickey Ibarra
- Christine Stanek
- Tom Kalil
- Jonathan Young

Event Participants:

- Mike Zelly, Executive Director of Disability Network
- Secretary Norman Mineta
- Nancy Cleveland of LC Technologies, who will demonstrate EyeGaze
- Sharon Regal of the Visually Impaired Center in Flint and Luke Zelly of the Disability Network, who will demonstrate Jaws for Windows
- Janina Sajka of the American Federation for the Blind, who will demonstrate Electronic Books
- Judy Brewer, Director of the Web Accessibility Initiative, W3C, who will demonstrate distance-learning

IV. SEQUENCE OF EVENTS

- Depart airport via motorcade en route to the Disability Network
- Arrive at the Disability Network, greeted by its Executive Director, Mike Zelly
- Zelly delivers brief welcoming remarks
- All proceed to Disability Network's new Assistive Technology Access Center
- YOU, Zelly, and Sec. Mineta observe a demonstration of the technologies listed above
- Depart en route Mott Community College

V. PRESS COVERAGE

Expanded pool press (i.e., pool, local and specialty media).

VI. REMARKS

None.

September 20, 2000

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V. PRESS COVERAGE

Expanded pool press (i.e., pool, local and specialty media).

VI. REMARKS

None.

September 20, 2000

**SPEECH AT MOTT COMMUNITY COLLEGE ON
THE DIGITAL DIVIDE AND AMERICANS WITH DISABILITIES**

DATE:	September 21, 2000
TIME:	2:15 p.m. – 4:00 p.m.
LOCATION:	Ballenger Field House, Mott Community College, Flint, Michigan
FROM:	Gene Sperling, Beth Cahill

I. PURPOSE

To highlight your Administration's efforts to bridge the digital divide for Americans with disabilities.

II. BACKGROUND

Mott Community College is a leader in the Flint area in helping people with disabilities lead more independent and rewarding lives:

- The college is building a new \$34 million high-tech Regional Technology Center in Flint. The money was raised through a local bond issue of \$17 million and grant from the State of Michigan. The Regional Technology Center will provide education and training in state-of-the-art manufacturing and simulation technology and offer full access for individuals with disabilities as well as training in the latest assistive technology. The center is also considering new curriculum and R&D on disability related mobility technology.
- The college is a partner – along with Disability Network and the US Department of Education -- in the Assistive Technology Access Center you visited earlier today.
- The college is also a partner in Flint's Broome Community Center, a converted middle school that is now fully accessible to people with disabilities, which offers employment services, training and counseling to Flint residents with and without disabilities. The Broome Center provides training in cutting-edge assistive technology.

III. PARTICIPANTS

Speaking Program:

- Mayor Woodrow Stanley
- Judy Brewer, Director of the Web Accessibility Initiative, W3C
- Secretary Norman Mineta
- Karla Hudson, real person, vision-impaired

IV. SEQUENCE OF EVENTS

- Arrive Mott Community College
- Greeters:
 - Lenore Croudy, Chair of Board of Trustees, Mott Community College
 - Dr. John Snell, Vice Chair of Board of Trustees, Mott Community College
 - Father James Bettendorf, Secretary of Board of Trustees, Mott Comm. College
- All proceed to holding room
- Off-stage announcement of speakers
- Mayor Woodrow Stanley makes brief remarks and introduces Judy Brewer
- Judy Brewer makes brief remarks and introduces Sec. Norman Mineta
- Sec. Norman Mineta makes brief remarks and introduces Karla Hudson
- Sec. Mineta escorts Karla Hudson to podium
- Karl Hudson makes brief remarks and introduces YOU
- YOU escort Karla back to her seat, then make remarks
- YOU work ropeline
- YOU proceed to holding room for Meet-and-Greet with about 20 guests
- YOU leave Meet-and-Greet and have photo taken in hallway with drivers and police
- Depart Mott Community College via motorcade en route Bishop International Airport

V. PRESS COVERAGE

Open press.

VI. REMARKS

Provided by speechwriting.

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V. PRESS COVERAGE

Open press.

VI. REMARKS

Provided by speechwriting.

PEOPLE WITH DISABILITIES AND THE DIGITAL DIVIDE

Draft language: 6/1/00

I. BACKGROUND

A1. Employment of Adults with Disabilities

Administration Disability Policy currently centers on the need to increase employment opportunities for people with disabilities, and has recently focused on the recommendations of the Presidential Task Force on Employment of Adults with Disabilities (hereafter, Task Force), which the President created by Executive Order on March 13, 1998. The main problem the Executive Order addressed was a staggering rate of unemployment for working-age people with "severe" disabilities. It is difficult to assess a precise employment rate because there are a multitude of different federal definitions of disability, and because statistics depend upon self-reporting. Data reported by the Census Bureau, however, based on the 1994-95 Survey of Income and Program Participation (SIPP), indicate the following employment rates among people 21 to 64 years of age:

- **82.1%** of people **without disabilities**
- **76.9%** of people **with disabilities not labeled severe**
- Only **26.1%** of people **with severe disabilities**.

The purpose of the Task Force, according to the Executive Order, "is to create a coordinated and aggressive national policy to bring adults with disabilities into gainful employment at a rate that is as close as possible to that of the general adult population." The conceptual foundation of the Task Force is that a *coordinated* and *holistic* approach is necessary to successfully increase employment rates. The availability of a job, for example, may be practically meaningless if an individual does not have a place to live, or transportation to get to a job, or health care, or adequate education and training, or assistive technology, etc.

Administration efforts to break down employment barriers for people with disabilities include:

- Passage of the Ticket to Work and Work Incentives Improvement Act;
- Issuing an OPM *Plan* for hiring and promoting people with disabilities throughout the Federal government;
- Raising the Social Security Substantial Gainful Activity (SGA) level to \$700;
- Ending the disparities between federal hiring of people with psychiatric and physical disabilities.

The framework for the President's New Markets Initiative dovetails with the employment challenges for people with disabilities. In fact, the language the President used to explain the need for the work incentives legislation closely paralleled the way he discussed New Markets. "Even as we celebrate more than 18 million new jobs and a nationwide unemployment rate of 4.2 percent, the lowest in a generation..., 75 percent of Americans with disabilities remain

unemployed," the President said on June 4. "This is not just a missed opportunity for Americans with disabilities. It's a missed opportunity for America. This is an era now of labor shortages, where companies go begging for employees they need to stay competitive in the global economy. And we simply cannot afford to ignore the potential of millions of potential workers simply because they have a disability."

The President noted that people with disabilities are central to resolving a top domestic policy challenge: "how can we continue to grow this economy and lift the standards of living of our people until we embrace everybody who has not participated in the recovery; keep the recovery going..., and not have an explosion of inflation?" The President suggested three possible answers: 1) get more unemployed people into the work force; 2) target large areas that have been left out of economic growth; and, 3) find more markets abroad. "The last big chunk of people in this country who could keep the economy going for all of us, with low inflation," President Clinton said, are "Americans with disabilities -- who want to work, who can work, and who are not in the work force. Every American citizen should have a selfish interest in the pursuit of this goal in the most aggressive possible way."

A2. People with Disabilities as a "New Market"

The difficulty with making a direct link between the New Markets Initiative and people with disabilities was that they (fortunately) do not constitute geographically-concentrated markets. People with disabilities instead are a sort of "cyber-community" spread throughout the nation, who cut across every race, ethnicity, gender, sexual orientation, and religion. The New Markets concept -- of being an untapped resource that could not only empower individuals but also help the economy -- was directly applicable to people with disabilities, but not concretely demonstrable. The President's Digital Divide initiative, however, makes a direct integration of people with disabilities possible.

II. THEMATIC FRAMEWORK

A. Suggested Themes for POTUS Disability Trip

The President's Disability Digital Divide trip will meet with the greatest success if it is situated in the broader context of employment of *people* with disabilities, not merely on the specific *technologies* that enable many people with disabilities to participate in the digital economy. Moreover, even the issues of technology access can be presented in the broader context of *usability* for all Americans. This framework will help ensure greater collaboration from the business community, which is in many respects fearful of a regulatory approach, and has even mobilized efforts against internet accessibility (for example, a February 9, 2000 congressional hearing on the subject). The following themes are suggested as a framework for the trip:

Maintaining Economic Growth. The United States has reached its lowest unemployment in decades by dipping under 3.9%. While this is a great achievement, it also presents challenges for meeting labor shortages. Congress has issued visas for high technology workers because so many positions have gone unfulfilled. With unemployment among people with "severe" disabilities exceeding 70%, not to mention underemployment of people with disabilities generally, people with disabilities represent an under-utilized reserve of American labor. Finding ways to encourage companies to hire and to mentor people with disabilities, and to work with the non-profit disability community to build awareness of job opportunities, is essential. One of the best ways of reducing the digital divide for people with disabilities is to increase employment, since income-level, as with the general population, is a strong determinant of access.

Availability & Usability. "Access" is generally discussed in terms of the availability of computers and the internet. Equally important is "usability," which applies to everyone. Individuals of all ages, backgrounds, and abilities have a variety of ways of accessing electronic information. Language, visual, motion, and hearing impairments have all been barriers that have presented substantial challenges. Some of the technologies originally designed to make electronic information usable to people with disabilities have wide applicability in the general population. The tools that have helped people with disabilities will make it easier for all Americans; developing more of them is the challenge and opportunity. Examples of "usability" include:

- Language translation software for documents;
- Speech Recognition software that eliminates the need to use a keyboard;
- "Audiotext" where the content of a document is verbally articulated for user to listen to;
- "Sticky keys" that make it easier for users who have difficulty using regular keyboards input information.

Double-Edged Sword for People with Disabilities and America. Information technology can provide social, educational, and economic opportunities for people disabilities like never before. A blind man taking customer product orders over the telephone for GSA, for example, who utilized speech-to-text and refreshable Braille technologies to do his job, recently explained an encounter he had with one of his customers. The GSA employee, "John," was such an effective and reliable customer service representative that this one customer, "Dave," always asked to place his orders with John. Dave surprised John one day by saying he was in Washington and wanted a chance to meet. John obliged him, but this time Dave was the one who got surprised. Over the telephone, Dave had no idea that John was blind, and could not have imagined a blind person could work so deftly with computers. John showed him how he listened to his customers in one ear as the computer translated speech to text in his other ear, while the refreshable Braille display indicated what was on the screen and enabled him to double-check his work. These and similar technologies enable many people with disabilities to compete in the workplace. But information technology is a double-edged sword, for if the technologies are not fully accessible and affordable, information technology will further shut people with disabilities out of the mainstream rather than promote improved integration. The ability of people with disabilities to help address America's labor shortages and promote economic growth in the New Economy thus depend upon accessible technologies -- both in terms of availability and usability.

Customization, Innovation and Accessible Technology. Each individual may, at certain times, have variable preferences in how they want the content of an electronic document communicated to them or how they would like to input information into the computer. He or she would want these preferences to be portable and not machine dependent. For people with sensory and motion impairments, the preferences are absolutely critical, but for others it will probably be a welcome convenience. If car manufacturers are focusing intently on developing electronic dashboards that can be customized by drivers, customizing how information is presented on computers and how information input functions can be viewed as just another stage in the development of consumer choice in products.

Meeting the Needs of the Boomer Generation. With the leading edge of the post-war baby boomers turning 55, there is a large demographic of individuals who will want to stay involved and active but whose sensory capabilities may not be as sharp as they once were. This generation also happens to be among the wealthiest in American history and have historically been able to use their buying power to enormous effect. Baby boomers who now own computers will certainly be looking for solutions (software, hardware, and services) that will enable them to remain productive and connected. The knowledge gained by developing tools to assist people with disabilities can be refined and applied to another market.

Affordability. The essence of mass marketing is developing products in demand at a price range that consumers are willing to pay. Home computers over the past five years have become, due to both changes in perception and improvements in capability, truly mass market products with increasingly high rates of household penetration in the population. Devices are being introduced in the market that now cost below a thousand dollars and some with limited capabilities can be obtained for around \$500. Irrespective of specialized technologies, people with disabilities benefit from affordability of general information technology. To offer comprehensive service to the market segment of individuals with disabilities, features that offer physical and sensory accessibility must also be affordable. Through further research and analysis they must be priced to service this demographic group while generating income and profits for the provider.

Government by Example. The Federal Government is in a position to use its influence as a purchaser of electronic software and information technology equipment to require changes in design that will increase accessibility for people with disabilities. Given the President's commitment to make the unemployment rate for people with disabilities approach the general population, federal agencies and departments can set trends for private industry by integrating people with disabilities into the federal workforce, and providing the technology tools they need. There are opportunities for exchange of information that may of be benefit to all.

Design-Stage Innovation. The realities of structural accessibility for buildings is instructive in the context of information technology. The ADA focused on new construction and renovations (requiring only that "readily achievable" modifications had to be made to existing structures) because the costs of accessibility features are minimal if incorporated at the design stage. Similarly, the costs of promoting accessibility in wireless telecommunications are minimal if pursued at the design stage. Working to develop a level of awareness of usability by corporate and government leaders in Research & Development can help avoid costly retroactive changes.

B. Conceptual Possibilities for Deliverables

Because recognition of disability as a central component of the digital divide lags behind recognition of other factors, public and private entities may be less prepared to offer initiatives to help bridge this digital divide. Following are thematic areas where actions might be pursued:

B1. Government

Hiring in Information Technology. Perhaps the most effective way to help address the IT needs of people with disabilities is to integrate them throughout federal IT jobs. They could help other IT experts understand the potential of people with disabilities while bringing their own expertise to tackling high-tech challenges.

Telecommuting Customer Service. Some government customer service operations could be directed toward people with disabilities trained to telecommute from their homes over the internet. This is a rapidly developing industry, and the government could help by demonstrating leadership in hiring people with disabilities.

High-Tech Internships and Mentoring. Less than one-half of one percent of individuals with disabilities who join the SSDI/SSI roles ever get off. By providing high school and college students with internships and other IT mentoring experiences, the federal government can help interest more people in IT and provide experience important for competing in the job market.

Data Collection and New Markets. Long-term solutions for bridging the disability divide for people with disabilities will necessitate effective information gathering and analysis, and communication with the business community, which are not currently being pursued adequately. Perhaps the President could issue an Executive Order creating a Task Force within the Department of Commerce, which could help establish the appropriate structures to make disability an integrated, priority issue within the Department.

Government Reporting. Commerce's *Falling through the Net* reports have been remarkably effective in building momentum for bridging the digital divide, but have not addressed disability issues. Disability could be identified as a priority area to be integrated in future reports. By accurately identifying and framing the problems as other aspects of the divide, government reports could have a profound impact on increasing employment for people with disabilities.

Accessibility of Government-Funded Digital Divide Initiatives. Many of the general community and classroom-oriented initiatives to bridge the digital divide could help people with disabilities, provided they are accessible to people with disabilities. In other words, separate programs need not be created, but agencies could be more aggressive in ensuring that they include usability in designing their information technology programs.

Section 508. Effective implementation of Section 508 could help create incentives in the private sector to be more aggressive in designing accessible technologies. The Department of Commerce could work with industry to set up a certification organization to develop testing procedures to determine compliance with testing standards.

Continued Funding of Assistive Technology Research. The National Institute on Disability and Rehabilitation Research (NIDRR) is a leader in promoting the development of accessible technologies. One current "Young Scholar" funded by NIDRR is developing "auditory displays," that use stereophonic (side-to-side) and tonal (up-and-down) sounds to present graphs and other visuals to blind persons.

Technology Loan Programs. Although many assistive technologies are minimal in cost, others, such as speech devices for people with cerebral palsy, are costly. Government-subsidized loans could help individuals with high-cost needs.

B2. Private Sector

Hiring Commitments. Welfare-to-Work was successful because the corporate sector made strong and public commitments to providing the education and training and other supports necessary to achieve lasting employment opportunities for people on welfare. Similar commitments to hire people with disabilities, especially in IT jobs, could heighten the overall economic well-being of disabled Americans, which correlates to computer ownership and internet access.

Internships and Mentoring. The private sector could partner with the federal government to provide internship and other mentoring opportunities for people with disabilities.

Donation of Internet Accounts. Internet service providers could parallel their initiatives for minority populations by donating internet free accounts to youth with disabilities. A questionnaire could be designed and administered on-line (someone could donate their services to do this) to determine the use of these accounts, and its impact on school, work, socialization, and other factors.

Telecommuting. Consulting firms could analyze which industries would benefit from a part-time, home-based telecommuting workforce and identify a business framework in which this could be a manageable enterprise.

Design-Stage R&D. IT firms could commit resources to R&D in developing accessible products and services at the design stage.

Supplying Computer and Internet Devices. Non-profits working with children and adults with disabilities could develop partnerships to provide low-end computer and web devices to help people with disabilities "get connected" to IT.

Sponsoring Accessible Computer Facilities. Corporations could play an important role in ensuring that library and community computer resource centers attend to the needs of people with disabilities.

Distance Learning. Internet Training companies could develop and execute a program on how to teach visually impaired and blind individuals through distance learning.

Media Attention. Electronic business magazines could make commitments to covering the opportunities (and challenges) presented by the disability labor market and the need for customizable interface products.

Draft September 15 2000

Background for September 21st trip - Creating Digital Opportunity for People with Disabilities

I. MESSAGE: With the right commitments from government and the private sector, information technology can be a powerful tool for improving the quality of life and expanding employment opportunities for people with disabilities.

II. GOALS: In cooperation with the disability community, the Administration has developed the following 5 goals that will help bridge the digital divide and create digital opportunity for Americans with disabilities:

1. **Existing IT products and services should be designed from the beginning to be more accessible for people with disabilities:** Currently, not all IT products and services are accessible for people with disabilities. For example, someone who is blind can't use the Web if a Web page uses graphics without also including text.
2. **We should improve the state-of-the-art of assistive technology:** Through research and development, we can make it even easier for people to use IT - through technologies such as voice recognition for people who can't use a keyboard.
3. **Employers should take advantage of IT to expand employment for people with disabilities:** The unemployment rate for people with disabilities is much higher than the general population. Accessible IT could make it easier for employers to hire people with disabilities and allow more people with disabilities to work from their home.
4. **Our existing "digital divide" initiatives should be designed so that people with disabilities can take advantage of them:** For example, our national network of Community Technology Centers should be designed to be accessible to people with disabilities.
5. **We should address inequities in access to assistive technology:** There are amazing technologies (e.g., people who are paralyzed can operate computers through the use of eye-gaze or brain waves) that are simply too expensive for low or moderate-income households.

III. PROPOSED SEQUENCE OF EVENTS

1. **President sees demonstration of technology that is accessible to people with disabilities**
(30-45 minutes)

Recommended Location: Disability Network/Technology Access Center

Examples of technology:

- An “eye-gaze” system that enables people without motor function or speech to operate a computer and use the Internet, solely through the movement of their eyes.
- Electronic books that allow people who are blind to have access to a universe of knowledge.
- Voice recognition systems that allow people who can't use a keyboard to use computers.
- An online MIT physics course that has been designed to be accessible for people with all types disabilities, through the use of captioning and descriptive video.

2. **Speaking program** (30-45 minutes)

Recommended Location: Career Alliance (or Mott Community College)

Possible Program:

- Someone from technology community (e.g. Tim Berners-Lee, Inventor of World Wide Web)
- Someone with a disability who can talk about the impact of technology
- President gives speech -- announces deliverables

IV. **BACKGROUND ON SITES**

Technology Access Center:

- Provides access to computers and assistive technology for people with disabilities and others in the community
- Has the "latest and greatest" assistive technology -- eyegaze, screen reader software, voice recognition
- Linked to the Mott Community College for distance learning through the Internet and video-conferencing
- Plans to offer a certification program for experts in assistive technology.
- This center is located at a Center for Independent Living called the Disability Network, which is staffed by people with disabilities, including Americorps volunteers with disabilities

Career Alliance One-Stop Service Center:

- "One-Stop" center for workforce development created under Workforce Investment Act of 1998 -- a major accomplishment of the Clinton Administration.
- A person with a disability serves as the Chairman of the local Workforce Investment Board, as well as the Chairman of the association of all Michigan Workforce Investment Boards (he's also the Director of the Disability Network independent living center.)
- Service Center is fully accessible and has state-of-the-art technology.
- Workforce Investment Board has created a Disability Council to increase employment with disabilities.
- Workforce Investment Board is working to implement the Ticket to Work and Work Incentives Improvement Act of 1999.

IV. EXAMPLES OF DELIVERABLES

Private sector

1. **High-tech CEOs adopt a company-wide accessibility policy:** Currently, very few high-tech companies have adopted an explicit corporate policy on accessibility. A number of high-tech CEOs (HP, Compaq, AOL, eBay, Bell South, Adobe, Applied Materials, etc.) have committed to implement "best practices" such as:
 - Training their workers to develop accessible products and services;
 - Giving their developers adequate resources to design accessible products and services;
 - Identify and fix accessibility problems in new versions of their hardware and software; and
 - Supporting research and development to improve the state-of-the-art of assistive technology.
2. **University presidents commit to expanding research and education on accessibility:** Presidents of a number of leading research universities have committed to:
 - Ensuring that computer scientists and engineers receive training on accessibility;
 - Expanding the number of faculty who conduct research on accessibility; and
 - Ensuring that university online resources are accessible to people with disabilities.

3. **Companies agree to increase employment of people with disabilities:** Employers would agree to:

- Target disability as part of their diversity recruitment goals;
- Make assistive technology available to their employees; and
- Promote the recruitment of youth with disabilities through summer internships and mentorships.

[Note: We do not have a critical mass of employers on this letter yet.]

4. **Commission on Assistive Technology:** The Mott Foundation, based in Flint, has agreed to support a blue-ribbon commission of experts in industry and the disability community to develop policy recommendations in some key areas on assistive technology. The host of the commission will be the Disability Network in Flint.

Government

1. **Making the Web accessible:** The National Institute on Disability and Rehabilitation Research will expand its funding for a joint project with industry to make the Web more accessible for people with disabilities called the Web Accessibility Initiative.
2. **Making educational content and distance learning accessible:** The Department of Education will provide a grant to industry and the National Center for Accessible Media to make educational software and distance learning accessible for people with disabilities.
3. **Ensuring that our Community Technology Centers are accessible for people with disabilities:** The Department of Education will give a grant called the "America Connects Consortium" to provide technical assistance to our community technology centers. As part of this grant, CTCs will be given technical assistance on how to ensure that they are accessible for people with disabilities.
4. **Executive Memorandum on Assistive Technology:** This Executive Memorandum directs HHS and other relevant agencies to create a task force on the issue of Medicare and Medicaid coverage on assistive technology.
5. **Increasing high-tech employment for people with disabilities:** The Department of Labor is considering targeting some of their "H1-B" money to increase high-tech training for people with disabilities. [Note: No final decision has been made on this.]
6. **Expanding the High-School/High-Tech program:** The President's Committee on Employment of People with Disabilities will expand its High School/High Tech program to several new cities and states. These programs provide high-school students with disabilities internships and other experiences in high-tech businesses.

V. PAPER

- 1-page summary/overview
- Detailed description of deliverables
- 1-page on background, why this is important
- 1-page on Clinton-Gore Digital Divide record
- 1-page on Clinton-Gore Digital Divide record for people with disabilities

Draft September 14, 2000

Background for September 21st trip - Creating Digital Opportunity for People with Disabilities

I. MESSAGE: With the right commitments from government and the private sector, information technology can be a powerful tool for improving the quality of life and expanding employment opportunities for people with disabilities.

II. GOALS: In cooperation with the disability community, the Administration has developed the following 5 goals that will help bridge the digital divide and create digital opportunity for Americans with disabilities:

1. **Existing IT products and services should be designed from the beginning to be more accessible for people with disabilities:** Currently, not all IT products and services are accessible for people with disabilities. For example, someone who is blind can't use the Web if a Web page uses graphics without also including text.
2. **We should improve the state-of-the-art of assistive technology:** Through research and development, we can make it even easier for people to use IT - through technologies such as voice recognition for people who can't use a keyboard.
3. **Employers should take advantage of IT to expand employment for people with disabilities:** The unemployment rate for people with disabilities is much higher than the general population. Accessible IT could make it easier for employers to hire people with disabilities and allow more people with disabilities to work from their home.
4. **Our existing "digital divide" initiatives should be designed so that people with disabilities can take advantage of them:** For example, our national network of Community Technology Centers should be designed to be accessible to people with disabilities.
5. **We should address inequities in access to assistive technology:** There are amazing technologies (e.g., people who are paralyzed can operate computers through the use of eye-gaze or brain waves) that are simply too expensive for low or moderate-income households.

III. PROPOSED SEQUENCE OF EVENTS

1. **President sees demonstration of technology that is accessible to people with disabilities**
(30 minutes)

Recommended Location: Disability Network/Technology Access Center

Examples of technology:

- An “eye-gaze” system that enables people without motor function or speech to operate a computer and use the Internet, solely through the movement of their eyes.
- Electronic books that allow people who are blind to have access to a universe of knowledge.
- Voice recognition systems that allow people who can't use a keyboard to use computers.
- An online MIT physics course that has been designed to be accessible for people with all types disabilities, through the use of captioning and descriptive video.

2. **President conducts roundtable discussion with CEOs, disability community representatives, technology experts, elected officials** (45 minutes - 1 hr)

Recommended Location: Disability Network or Career Alliance

Possible Topics:

- Why accessible IT matters to people with disabilities
- Role of companies, government and universities in making IT accessible
- Strategies to increase employment of people with disabilities
- Improving affordability of technology

3. **Speaking program** (30 minutes)

Recommended Location: Career Alliance

Possible Program:

- Someone from technology community (e.g. Tim Berners-Lee, Inventor of World Wide Web)
- Someone with a disability who can talk about the impact of technology
- President gives speech -- announces deliverables

IV. BACKGROUND ON SITES

Technology Access Center:

- Provides access to computers and assistive technology for people with disabilities and others in the community
- Has the "latest and greatest" assistive technology -- eyegaze, screen reader software, voice recognition
- Linked to the Mott Community College for distance learning through the Internet and video-conferencing
- Plans to offer a certification program for experts in assistive technology.
- This center is located at a Center for Independent Living called the Disability Network, which is staffed by people with disabilities, including Americorps volunteers with disabilities

Career Alliance One-Stop Service Center:

- "One-Stop" center for workforce development created under Workforce Investment Act of 1998 -- a major accomplishment of the Clinton Administration.
- A person with a disability serves as the Chairman of the local Workforce Investment Board, as well as the Chairman of the association of all Michigan Workforce Investment Boards (he's also the Director of the Disability Network independent living center.)
- Service Center is fully accessible and has state-of-the-art technology.
- Workforce Investment Board has created a Disability Council to increase employment with disabilities.
- Workforce Investment Board is working to implement the Ticket to Work and Work Incentives Improvement Act of 1999.

IV. EXAMPLES OF DELIVERABLES

Private sector

1. **High-tech CEOs adopt a company-wide accessibility policy:** Currently, very few high-tech companies have adopted an explicit corporate policy on accessibility. A number of high-tech CEOs (HP, Compaq, AOL, eBay, Bell South, Adobe, Applied Materials, etc.) have committed to implement "best practices" such as:

- Training their workers to develop accessible products and services;
 - Giving their developers adequate resources to design accessible products and services;
 - Identify and fix accessibility problems in new versions of their hardware and software; and
 - Supporting research and development to improve the state-of-the-art of assistive technology.
2. **University presidents commit to expanding research and education on accessibility:** Presidents of a number of leading research universities have committed to:
- Ensuring that computer scientists and engineers receive training on accessibility;
 - Expanding the number of faculty who conduct research on accessibility; and
 - Ensuring that university online resources are accessible to people with disabilities.
3. **Companies agree to increase employment of people with disabilities:** Employers would agree to:
- Target disability as part of their diversity recruitment goals;
 - Make assistive technology available to their employees; and
 - Promote the recruitment of youth with disabilities through summer internships and mentorships.
- [Note: We do not have a critical mass of employers on this letter yet.]
4. **Commission on Assistive Technology:** The Mott Foundation, based in Flint, has agreed to support a blue-ribbon commission of experts in industry and the disability community to develop policy recommendations in some key areas on assistive technology. The host of the commission will be the Disability Network in Flint.

Government

1. **Making the Web accessible:** The National Institute on Disability and Rehabilitation Research will expand its funding for a joint project with industry to make the Web more accessible for people with disabilities called the Web Accessibility Initiative.
2. **Making educational content and distance learning accessible:** The Department of Education will provide a grant to industry and the National Center for Accessible Media to make educational software and distance learning accessible for people with disabilities.

3. **Ensuring that our Community Technology Centers are accessible for people with disabilities:** The Department of Education will give a grant called the "America Connects Consortium" to provide technical assistance to our community technology centers. As part of this grant, CTCs will be given technical assistance on how to ensure that they are accessible for people with disabilities.
4. **Executive Memorandum on Assistive Technology:** This Executive Memorandum directs HHS and other relevant agencies to create a task force on the issue of Medicare and Medicaid coverage on assistive technology.
5. **Increasing high-tech employment for people with disabilities:** The Department of Labor is considering targeting some of their "H1-B" money to increase high-tech training for people with disabilities. [Note: No final decision has been made on this.]
6. **Expanding the High-School/High-Tech program:** The President's Committee on Employment of People with Disabilities will expand its High School/High Tech program to several new cities and states. These programs provide high-school students with disabilities internships and other experiences in high-tech businesses.

V. PAPER

- 1-page summary/overview
- Detailed description of deliverables
- 1-page on background, why this is important
- 1-page on Clinton record

Draft August 31, 2000

MEMORANDUM FOR THE PRESIDENT

FROM: Gene Sperling, Tom Kalil
Mary Beth Cahill, Jonathan Young
Maria Echaveste
Stephanie Street

RE: September 21st event on technology for people with disabilities

I. SUMMARY:

During your April "digital divide" tour, you announced that an additional part of the tour would focus on the potential of information and communications technologies to expand opportunities for people with disabilities. This trip is now scheduled for September 21st. For the past seven months we have worked extensively with the disability community and experts in the academic and corporate sectors to understand how best to bridge the "digital divide" for people with disabilities. This memo identifies our proposed objectives for the trip, recommends several options for site venues, and outlines potential deliverables.

II. TRIP OBJECTIVES:

We have identified the following five goals for bridging the "digital divide" among people with disabilities. As with previous trips, you can help meet these objectives by calling attention to these issues and announcing concrete commitments by the government, industry, and non-profit organizations.

1. **Existing IT products and services should be designed from the beginning to be more accessible for people with disabilities:** Currently, not all IT products and services are accessible for people with disabilities. For example, a blind person who uses a screen-reader can't readily use the Web if a Web page uses graphics without also including text descriptions.
2. **We should improve the state-of-the-art of assistive technology:** Through continued research and development, we can make it even easier for people to use IT -- by promoting the concept of "universal design" as well as developing specialized technologies, such as operating a computer through "brain waves" or "eye gaze."
3. **Employers should take advantage of IT to expand employment for people with disabilities:** The unemployment rate for people with disabilities is much higher than the general population. Accessible IT could make it easier for employers to hire people with disabilities and allow more people with disabilities to work from their home. People with disabilities can thereby help fill the demand for high-skilled IT employees.

4. **Our existing "digital divide" initiatives should be designed so that people with disabilities can take advantage of them:** For example, our national network of Community Technology Centers should be designed to be accessible to people with disabilities.
5. **We should address inequities in access to assistive technology:** Many of the innovative technologies are simply too expensive for low or moderate-income households. Moreover, many people with disabilities cannot afford even basic computer equipment.

III. SITE OPTIONS

Ideally, your trip would consist of two destinations, one focusing on the design of technology and the other focusing on how technology can improve the lives of people with disabilities:

- The first stop would focus on the information technologies that can be used by people with disabilities. At this venue you could see demonstrations of universally accessible web design and specialized assistive technology. We recommend **Boston, Massachusetts**.
- At the second stop, you would visit a successful program that is using technology to allow people with disabilities to work, improve their health care, or pursue a science or engineering degree at a university. You could also do a roundtable with CEOs and people from the disability community that would discuss what steps the United States must take to ensure that all Americans with disabilities are benefiting from these new technologies. We recommend **Atlanta, Georgia** or **Flint, Michigan**.

A. MORNING EVENT

Message

- We need to ensure that we develop IT products and services that are accessible to and usable by everyone, including people with disabilities.
- Making IT accessible to people with disabilities will help everyone (especially, for example, as people age), just as curb-cuts help families with baby strollers.

Sequence Of Events

- You would see a demonstration of accessible technologies. This could include how to design accessible web pages and design an on-line course that uses captioning and video description. This demonstration could also feature a specialized assistive technology such as the "Eye-Gaze" system. This amazing technology was demonstrated at the Vice President's home as part of the 10th anniversary of the ADA. By "reading" eye movement, this technology enables people with significant physical disabilities to operate a computer and search the Internet as well as control one's environment (e.g. lights and

doors). You know someone who uses one of these systems -- Joe Martin, who has Lou Gehrig's disease and works at NationsBank in Charlottesville, North Carolina.

- There would be significant media interest in this and we would work with the networks to ensure that they had good footage of mainstream and assistive technologies.
- Following the demonstration, we would do a speaking program with people from the high-tech industry and the disability community. You would announce most of the deliverables at the morning event.

Boston, Massachusetts

There are two very important accessibility projects in the Boston area:

- MIT is the home of the World Wide Web Consortium's Web Accessibility Initiative (WAI). The World Wide Web Consortium is the industry consortium that develops the standards for the Web. WAI's guidelines, if adopted widely, will make the web accessible for people with disabilities. For example, web designers can use the tab key and text descriptions of graphics to provide access to blind people who rely on screen-readers to "read" computer text. The Department of Education is planning to increase its support for this project. (The World Wide Web Consortium is run by Tim Berners-Lee, the man who invented the Web and has chosen to dedicate his efforts to improving it.)
- WGBH is the home of the National Center for Accessible Media, which is the national leader in closed captioning and descriptive video services. The Department of Education will be giving the National Center for Accessible Media a grant to develop standards to make "e-learning" accessible for people with disabilities.

B. AFTERNOON EVENT

Message

- Information technology can help people with disabilities increase their participation in the workforce and go to college. If we want to be able to continue to grow our economy, we need to ensure that all people with disabilities have these opportunities. Making technologies more widely available can help us meet the objectives of the Workforce Investment Act of 1988 and the Ticket to Work and Work Incentives Improvement Act of 1999.

Sequence Of Events

- You would tour the program and meet with the people who are benefiting from it.

- We could host a roundtable discussion with employers, people with disabilities, and experts to discuss how best to increase the employment rate of people with disabilities and make IT more affordable to all Americans.

Atlanta, Georgia

There are a number of excellent disability programs in Georgia that would make Atlanta a suitable venue, including:

- **Shepherd Center Telerehabilitation Program.** The Shepherd Center is a specialty hospital serving people with disabilities resulting from impairments that affect the central nervous system, such as spinal cord injuries and brain injuries. Through grants from the Department of Commerce and the Department of Education, and partnerships with the private sector, the Shepherd Center is now expanding the scope of patient treatment through telerehabilitation. Under this new program, patients will be provided a personal computer with a customized platform supporting videoconferencing, remote monitoring of vital health measurements, Internet access, and multimedia instructional materials. The program will improve community reintegration (including return to work), bridge the gap of services for people in remote areas, reduce secondary complications, and incur lower overall health care and support costs.
- **Georgia High School/High Tech.** With both public and private funding and the cooperation of businesses, federal and state agencies, not-for-profit organizations, and local school districts, High School/High Tech uses site visits, mentoring, shadowing, and paid summer internships to provide students with opportunities to learn more about careers in scientific, engineering and technology-related fields. Georgia's HS/HT program is one of the most active and extensive programs in the country. One group of students was honored on Space Day 2000 at the Air and Space Museum for its successful design and execution of a Space Shuttle butterfly experiment. Although this model HS/HT site is in Albany, Georgia, we may be able to announce a new site in Atlanta.

Flint, Michigan

Flint has two model programs that increase employment for people with disabilities, including a focus on technology, which are integrated with their broader worker training programs.

- **Career Alliance, Inc.** Opened in 1998, this Workforce Investment Act (WIA) One-Stop Service Center features the latest in assistive technology for individuals with any type of disability, including voice recognition software, screen reader software, and magnified screens and information in alternative formats. At the One-Stop, individuals with disabilities are able to make informed choices about the employment, training and support services they need. The One-Stop Center is the most inclusive and accessible in the state, servicing Genesee and Shiawassee Counties and its 86,000 residents with disabilities. The Michigan Workforce Development Board that oversees One-Stop

Centers across the state, which is chaired by a person with a disability, has formed a Disability Council to educate employers on the advantages of employing individuals with disabilities. The Workforce Board is also working to implement the Ticket to Work and Work Incentives Improvement Act (TWIIA) in Michigan.

- **Disability Network.** This independent living center is operated by the Chair of Michigan's Workforce Development Board, governed and staffed by people with disabilities, and supported by AmericCorps volunteers. A new Access Center is being created at the Disability Network, which will be a neighborhood entry point to the new \$34 million high-tech Regional Technology Center in Flint. The Disability Network's Access Center, created in partnership with Mott Community College and the U.S. Department of Education, will feature assistive and adaptive technology on high-tech computers, using high speed T1 access lines to the Internet, including sip & puff controls and Eye-gaze technology. The Access Center will offer a newly-developed Assistive Technology certification program, not available anywhere else in the United States. It will also be an integrated setting available to all people in the surrounding neighborhoods, including citizens with disabilities.

IV. POTENTIAL DELIVERABLES:

We are still working on and expect additional deliverables, but these are some of the possibilities. The disability community has urged us to focus on getting the private sector to make their products more accessible, not merely making specific financial commitments.

1. **High-tech CEOs adopt a company-wide accessibility policy:** Currently, very few high-tech companies have adopted an explicit corporate policy on accessibility. High-tech CEOs would commit to implement "best practices" such as:
 - Training their workers to develop accessible products and services;
 - Giving their developers adequate resources to design accessible products and services;
 - Identifying and fixing accessibility problems in new versions of their hardware and software; and
 - Supporting research and development to improve the state-of-the-art of assistive technology.
2. **University presidents commit to expanding research and education on accessibility:** Presidents of the leading research universities would commit to:
 - Ensuring that computer scientists and engineers receive training on accessibility;
 - Expanding the number of faculty who conduct research on accessibility; and

- Ensuring that university online resources are accessible to people with disabilities.
3. **Companies agree to increase employment of people with disabilities:** Employers would agree to:
 - Targeting disability as part of their diversity recruitment goals;
 - Making assistive technology available to their employees; and
 - Promoting the recruitment of youth with disabilities through summer internships and mentorships.
 4. **Commission on Assistive Technology:** We would announce that foundations are supporting a blue-ribbon commission of experts in industry and the disability community to develop policy recommendations in some key areas, such as financing assistive technology for people who may not be able to afford it and working with colleges and universities to improve education and outreach about accessible technology.
 5. **Making educational content accessible:** The Department of Education will provide a grant to industry and the National Center for Accessible Media to make educational software and distance learning accessible for people with disabilities.
 6. **Making the Web accessible:** The National Institute on Disability and Rehabilitation Research will expand its funding for a joint project with industry to make the Web more accessible for people with disabilities.

Draft August 29, 2000

MEMORANDUM FOR THE PRESIDENT

FROM: Gene Sperling, Tom Kalil
Mary Beth Cahill, Jonathan Young
Maria Echaveste
Stephanie Street

RE: September 21st event on technology for people with disabilities

I. SUMMARY:

During your April trip on the "digital divide," you announced that you would have an event that focused specifically on how new information and communications technologies can help people with disabilities. This trip is currently scheduled for September 21st. This memo identifies our proposed objectives for the trip, some options on site venues, and potential deliverables.

II. GOALS FOR THE TRIP:

After extensive outreach with the disabilities community, we have identified 5 goals that we think you should use this event to promote -- by calling attention to the issue and by announcing concrete commitments by the government, industry, and non-profit organizations.

1. **Existing IT products and services should be designed from the beginning to be more accessible for people with disabilities:** Currently, not all IT products and services are accessible for people with disabilities. For example, someone who is blind can't use the Web if a Web page uses graphics without also including text.
2. **We should improve the state-of-the-art of assistive technology:** Through research and development, we can make it even easier for people to use IT - through technologies such as voice recognition for people who can't use a keyboard.
3. **Employers should take advantage of IT to expand employment for people with disabilities:** The unemployment rate for people with disabilities is much higher than the general population. Accessible IT could make it easier for employers to hire people with disabilities and allow more people with disabilities to work from their home. People with disabilities can thereby help fill the demand for high-skilled IT employees.
4. **Our existing "digital divide" initiatives should be designed so that people with disabilities can take advantage of them:** For example, our national network of Community Technology Centers should be designed to be accessible to people with disabilities.
5. **We should address inequities in access to assistive technology:** There are amazing technologies (e.g., people who are paralyzed can operate computers through the use of eye-gaze or brain waves) that are simply too expensive for low or moderate-income households.

III. SITE OPTIONS

Ideally, your trip would consist of two stops:

- The first stop would focus on the information technologies that can be used by people with disabilities. At this venue you could see demonstrations of assistive technology. We recommend **Madison, Wisconsin** or **Boston, Massachusetts**.
- At the second stop, you would visit a successful program that is using technology to allow people with disabilities to work, improve their health care, or pursue a science or engineering degree at a university. You could also do a roundtable with CEOs and people from the disabilities community that would discuss what steps the United States must take to ensure that all Americans with disabilities are benefiting from these new technologies. We recommend **Atlanta, Georgia** or **Flint, Michigan** or **Seattle, Washington**.

A. MORNING EVENT

Message

- We need to ensure that we develop IT products and services that are accessible for people with disabilities.
- Doing this will help everyone, not just people with disabilities, just as curb-cuts help families with baby strollers in addition to people with wheel-chairs.

Sequence Of Events

- You would see a demonstration of accessible technologies. An example is the "Eye-Gaze" system. This amazing technology was demonstrated at the Vice President's home as part of the 10th anniversary of the ADA. It allows people with spinal cord injuries and multiple sclerosis to turn lights and household appliances on and off, send e-mail, access the Internet, and use computer software -- all by looking at a computer screen. A college student with severe cerebral palsy is writing her college papers and doing research on the Web using only her eyes. You know someone who uses one of these systems - Joe Martin, who has Lou Gehrig's disease and who works at NationsBank in Charlottesville, North Carolina.
- We think there would be significant media interest in this, and would work with the networks to ensure that they had good footage of assistive technology.
- Following the demonstration, we would do a speaking program with people from the high-tech industry and the disabilities community. You would announce most of the deliverables at the morning event.

Madison, Wisconsin

The University of Wisconsin, Madison campus would make a great backdrop for an event on accessible technology:

- The School of Engineering is making a commitment to higher additional faculty to work in the area of assistive technology. This would be a good venue for the event.
- It is the home of the Trace Research and Development Center, which is funded by the Department of Education to make IT more accessible for people with disabilities. Over the years, they have worked to make computers, the Internet, ATM machines, pagers and voice mail more accessible.
- Several of the courses at the University of Wisconsin teach undergraduate and graduate students about accessibility issues, and a number of engineering students have used their knowledge to develop accessibility projects in the community.
- The Wisconsin business community has been a leader in hiring people with disabilities. With one of the lowest unemployment rates in the country for decades, its area businesses have been innovative in finding ways to bring people with disabilities into the economic mainstream.

Boston, Massachusetts

There are two very important accessibility projects in the Boston area:

- MIT is the home of the World Wide Web Consortium's Web Accessibility Initiative. The World Wide Web Consortium is the industry consortium that develops the standards for the Web. The Web Accessibility Initiative has developed guidelines, which, if adopted widely, will make the web accessible for people with disabilities. For example, blind people rely on screen readers to "read" the text on a Web page. If a company or government web page uses graphics without also providing text, it will be impossible for someone who is blind to access it. The Department of Education is planning to increase its support for this project. The World Wide Web Consortium is run by Tim Berners-Lee, the man who invented the Web and has chosen to work on continuing to improve it as opposed to profit from the Internet "gold-rush."
- WGBH is the home of the National Center for Accessible Media, which is the national leader in closed captioning and descriptive video services. The Department of Education will be giving the National Center for Accessible Media a grant to develop standards to make "e-learning" accessible for people with disabilities.

B. AFTERNOON EVENT

Message

- Information technology can help people with disabilities increase their participation in the workforce and go to college. If we want to be able to continue to grow our economy, we need to ensure that all people with disabilities have these opportunities. This builds on your accomplishments such as the Work Incentives Act (Kennedy-Jeffords).

Sequence Of Events

- Tour the program and meet with the people that are participating in it.
- Roundtable with employers, people with disabilities and experts to discuss future challenges in making assistive technology affordable to all Americans.

Atlanta, Georgia

There are a number of excellent disabilities programs in Atlanta that would make appropriate venues for your trip, including:

- **Shepherd Center Telerehabilitation Program.** The Shepherd Center is a specialty hospital serving people with disabilities resulting from impairments that affect the central nervous system, such as spinal cord injuries and brain injuries. Through grants from the Department of Commerce and the Department of Education, and partnerships with the private sector, the Shepherd Center is now expanding the scope of patient treatment through telerehabilitation. Under this new program, patients will be provided a personal computer with a customized platform supporting videoconferencing, remote monitoring of vital health measurements, Internet access, and multimedia instructional materials. The program will improve community reintegration (including return to work), bridge the gap of services for people in remote areas, reduce secondary complications, and incur lower overall health care and support costs.
- **Georgia High School High Tech.** With both public and private funding and the cooperation of businesses, federal and state agencies, not-for-profit organizations, and local school districts, High School High Tech uses site visits, mentoring, shadowing, and paid summer internships to provide students with opportunities to learn more about careers in scientific, engineering and technology-related fields. Georgia's HSHT program is one of the most active and extensive programs in the country. One group of students was recently honored at the Air and Space Museum for its successful design and execution of a Space Shuttle butterfly experiment. Although this program is currently in Albany, we may be able to announce an expansion of it to Atlanta.

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Flint has three programs that increase employment for people with disabilities, including a focus on technology, which are integrated with their broader worker training programs.

- **Career Alliance, Inc.** Opened in 1998, this Work Investment Act (WIA) One-Stop Service Center features the latest in assistive technology for individuals with any type of disability, including voice recognition software, screen reader software, and magnified screens and information in alternative formats. At the One-Stop, individuals with disabilities are able to make informed choices about the employment, training and support services they need. The One-Stop Center is the most inclusive and accessible in the state, servicing Genesee and Shiawassee Counties and its 86,000 residents with disabilities. The Michigan Workforce Development Board that oversees One-Stop Centers across the state, which is chaired by a person with a disability, has formed a Disability Council to educate employers on the advantages of employing individuals with disabilities. The Workforce Board is also working to implement the Work Incentives Improvement Act in Michigan.
- **Disability Network.** This independent living center is operated by the Chair of Michigan's Workforce Development Board, governed and staffed by people with disabilities, and supported by AmericCorps volunteers. A new Access Center is being created at the Disability Network, which will be a neighborhood entry point to the new \$34 million high-tech Regional Technology Center in Flint. The Disability Network's Access Center, created in partnership with Mott Community College and the U.S. Department of Education, will feature assistive and adaptive technology on high-tech computers, using high speed T1 access lines to the Internet, including sip & puff controls and eyegaze technology. The Access Center will offer a newly-developed Assistive Technology certification program, not available anywhere else in the United States. It will also be an integrated setting available to all people in the surrounding neighborhoods, including citizens with disabilities.

Seattle, Washington

The University of Washington at Seattle is the home of an NSF-funded, award-winning program called DO-IT (Disabilities, Opportunities, Internetworking, and Technology). The program has a number of elements:

- It helps high-school students with disabilities pursue careers and college;
- Participants in the DO-IT program that are in college become Ambassadors and mentors to high school students;
- Students with disabilities participate in work-based learning;

- Young people with disabilities participate in a summer camp to learn how to use computers and the Internet;
- College faculty and administrators are given training on ways to work successfully with students with disabilities.

IV. POTENTIAL DELIVERABLES:

We are still working on developing additional deliverables, but these are some of the possibilities that we have identified so far. The disabilities community has urged us to focus on getting the private sector to make their products more accessible, not merely making specific financial commitments.

1. **High-tech CEOs adopt a company-wide accessibility policy:** Currently, very few high-tech companies have adopted an explicit corporate policy on accessibility. High-tech CEOs would commit to implement "best practices" such as:
 - Training their workers to develop accessible products and services;
 - Giving their developers adequate resources to design accessible products and services;
 - Identify and fix accessibility problems in new versions of their hardware and software; and
 - Supporting research and development to improve the state-of-the-art of assistive technology.
2. **University presidents commit to expanding research and education on accessibility:** Presidents of the leading research universities would commit to:
 - Ensuring that computer scientists and engineers receive training on accessibility;
 - Expanding the number of faculty who conduct research on accessibility; and
 - Ensuring that university online resources are accessible to people with disabilities.
3. **Companies agree to increase employment of people with disabilities:** Employers would agree to:
 - Target disability as part of their diversity recruitment goals;
 - Make assistive technology available to their employees; and
 - Promote the recruitment of youth with disabilities through summer internships and mentorships.

4. **Commission on Assistive Technology:** We would announce that foundations are supporting a blue-ribbon commission of experts in industry and the disabilities community to develop policy recommendations in some key areas, such as financing of assistive technology for people who may not be able to afford it.
5. **Making educational content accessible:** The Department of Education will provide a grant to industry and the National Center for Accessible Media to make educational software and distance learning accessible for people with disabilities.
6. **Making the Web accessible:** The National Institute on Disability and Rehabilitation Research will expand its funding for a joint project with industry to make the Web more accessible for people with disabilities.

Draft August 24, 2000

MEMORANDUM

FROM:

RE: TRIP ON PEOPLE WITH DISABILITIES AND INFORMATION
TECHNOLOGY

Summary:

During your April trip on the "digital divide," you announced that you would have an event that focused specifically on how new information and communications technologies can help people with disabilities. This trip is currently scheduled for September 21st. This memo identifies our proposed objectives for the trip, some options on site venues, and potential deliverables.

I. Goals for the trip:

After extensive outreach with the disabilities community, we have identified 5 goals that we think you should use this event to promote -- by calling attention to the issue and by announcing concrete commitments by the government, industry, and non-profit organizations.

1. **Existing IT products and services should be designed from the beginning to be more accessible for people with disabilities:** Currently, not all IT products and services are accessible for people with disabilities. For example, someone who is blind can't use the Web if a Web page uses graphics without also including text.
2. **We should improve the state-of-the-art of assistive technology:** Through research and development, we can make it even easier for people to use IT - through technologies such as voice recognition for people who can't use a keyboard.
3. **Employers should take advantage of IT to expand employment for people with disabilities:** The unemployment rate for people with disabilities is much higher than the general population. Accessible IT could make it easier for employers to hire people with disabilities, and communications technology could allow more people with disabilities to work from their home. People with disabilities can thereby help fill the demand for high-skilled IT employees.
4. **Our existing "digital divide" initiatives should be designed so that people with disabilities can take advantage of them:** For example, our national network of Community Technology Centers should be designed to be accessible to people with disabilities.
5. **We should address inequities in access to assistive technology:** There are amazing technologies (e.g., people who are paralyzed can operate computers through the use of

eye-gaze or brain waves) that are simply too expensive for low or moderate-income households.

II. **Site options**

Ideally, your trip would consist of two stops:

- The first stop would focus on the information technologies that can be used by people with disabilities. At this venue you could see demonstrations of assistive technology. We recommend **Madison, Wisconsin** or **Boston, Massachusetts**.
- At the second stop, you would visit a successful program that is using technology to allow people with disabilities to work, improve their health care, or pursue a science or engineering degree at a university. You could also do a roundtable with CEOs and people from the disabilities community that would discuss what steps the United States must take to ensure that all Americans with disabilities are benefiting from these new technologies. We recommend **Atlanta, Georgia** or **Kalamazoo, Michigan** or **Seattle, Washington**.

MORNING EVENT

MADISON, WISCONSIN

The University of Wisconsin, Madison campus would make a great backdrop for an event on accessible technology:

- It is the home of the Trace Research and Development Center, which is funded by the Department of Education to make IT more accessible for people with disabilities. Over the years, they have worked to make computers, the Internet, ATM machines, pagers and voice mail more accessible.
- Several of the courses at the University of Wisconsin teach undergraduate and graduate students about accessibility issues, and a number of engineering students have used their knowledge to develop accessibility projects in the community.
- Statewide, Wisconsin is a leader in hiring people with disabilities. With one of the lowest unemployment rates in the country for decades, its area businesses have been innovative in finding ways to bring people with disabilities into the economic mainstream.

BOSTON, MASSACHUSETTS

There are two very important accessibility projects in the Boston area:

- MIT is the home of the World Wide Web Consortium's Web Accessibility Initiative. The World Wide Web Consortium is the industry consortium that develops the standards for the Web. The Web Accessibility Initiative has developed guidelines, which, if adopted widely, will make the web accessible for people with disabilities. For example, blind people rely on screen readers to "read" the text on a Web page. If a company or government web page uses

graphics without also providing text, it will be impossible for someone who is blind to access it. The Department of Education is planning to increase its support for this project. The World Wide Web Consortium is run by Tim Berners-Lee, the man who invented the Web and has chosen to work on continuing to improve it as opposed to profit from the Internet "gold-rush."

- WGBH is the home of the National Center for Accessible Media, which is the national leader in closed captioning and descriptive video services. The Department of Education will be giving the National Center for Accessible Media a grant to develop standards to make "e-learning" accessible for people with disabilities.

MESSAGE

- We need to ensure that we develop IT products and services that are accessible for people with disabilities.
- Doing this will help everyone, not just people with disabilities, just as curb-cuts help families with baby strollers in addition to people with wheel-chairs.

SEQUENCE OF EVENTS

- You would see a demonstration of accessible technologies. An example is the "Eye-Gaze" system, which allows people with spinal cord injuries to operate a computer merely by looking at different parts of the screen.
- A speaking program with people from the high-tech industry and the disabilities community. You would announce most of the deliverables at the morning event.

AFTERNOON EVENT

ATLANTA, GEORGIA

There are a number of excellent disabilities programs in Atlanta that would make appropriate venues for your trip, including:

- **Shepherd Center Telerehabilitation Program.** The Shepherd Center is a specialty hospital serving people with disabilities resulting from impairments that affect the central nervous system, such as spinal cord injuries and brain injuries. Through grants from the Department of Commerce and the Department of Education, and partnerships with the private sector, the Shepherd Center is now expanding the scope of patient treatment through telerehabilitation. Under this new program, patients will be provided a personal computer with a customized platform supporting videoconferencing, remote monitoring of vital health measurements, Internet access, multimedia instructional materials. The program will improve community reintegration (including return to work), bridge the gap of services for people in remote areas, reduce secondary complications, and incur lower overall health care and support costs.

- **Georgia High School High Tech.** With both public and private funding and the cooperation of businesses, federal and state agencies, not-for-profit organizations, and local school districts, High School High Tech uses site visits, mentoring, shadowing, and paid summer internships to provide students with opportunities to learn more about careers in scientific, engineering and technology-related fields. Georgia's HSHT program is one of the most active and extensive programs in the country. One group of students was recently honored at the Air and Space Museum for its successful design and execution of a Space Shuttle butterfly experiment.

KALAMAZOO, MICHIGAN

Kalamazoo has two programs that increase employment for people with disabilities:

- **Western Michigan University.** In cooperation with IBM, Smartforce.com, and Monster.com -- the Association of Rehabilitation Programs in Computer Technology (ARPCT) is about to launch a national on-line support center for preparing people with disabilities for IT careers. The corporate partners have already donated over half million in this project to bring computer-based IT training to homebound and other individuals with disabilities.
- **Michigan Career and Technical Institute.** MCIT is the second largest comprehensive vocational rehabilitation training center in the nation. It trains over 800 individuals per year in a 10 different technology-related areas at its Planwell campus and many more through its statewide distance learning network. It offers two-year residential technical training for people with disabilities seeking new career opportunities. It is operated by the state-federal vocational rehabilitation program.

SEATTLE, WASHINGTON

The University of Washington at Seattle is the home of an NSF-funded, award-winning program called DO-IT (Disabilities, Opportunities, Internetworking, and Technology). The program has a number of elements:

- It helps high-school students with disabilities pursue careers and college;
- Participants in the DO-IT program that are in college become Ambassadors and mentors to high school students;
- Students with disabilities participate in work-based learning;
- Young people with disabilities participate in a summer camp to learn how to use computers and the Internet;
- College faculty and administrators are given training on ways to work successfully with students with disabilities.

MESSAGE

- Information technology can help people with disabilities increase their participation in the workforce and go to college. If we want to be able to continue to grow our economy, we need to ensure that all people with disabilities have these opportunities.

SEQUENCE OF EVENTS

- Tour the program and meet with the people that are participating in it.
- Roundtable with employers, people with disabilities and experts to discuss future challenges in making assistive technology affordable to all Americans.

III. Potential deliverables:

We are still working on developing additional deliverables, but these are some of the possibilities that we have identified so far. The disabilities community has urged us to focus on getting the private sector to make their products more accessible, not merely making specific financial commitments.

1. **High-tech CEOs adopt a company-wide accessibility policy:** Currently, very few high-tech companies have adopted an explicit corporate policy on accessibility. High-tech CEOs would commit to implement "best practices" such as:
 - Training their workers to develop accessible products and services;
 - Giving their developers adequate resources to design accessible products and services;
 - Identify and fix accessibility problems in new versions of their hardware and software; and
 - Supporting research and development to improve the state-of-the-art of assistive technology.
2. **University presidents commit to expanding research and education on accessibility:** Presidents of the leading research universities would commit to:
 - Ensuring that computer scientists and engineers receive training on accessibility;
 - Expanding the number of faculty who conduct research on accessibility; and
 - Ensuring that university online resources are accessible to people with disabilities.

3. **Companies agree to increase employment of people with disabilities:** Employers would agree to:
 - Target disability as part of their diversity recruitment goals;
 - Make assistive technology available to their employees; and
 - Promote the recruitment of youth with disabilities through summer internships and mentorships.
4. **Commission on Assistive Technology:** We would announce that foundations are supporting a blue-ribbon commission of experts in industry and the disabilities community to develop policy recommendations in some key areas, such as financing of assistive technology for people who may not be able to afford it.
5. **Making educational content accessible:** The Department of Education will provide a grant to industry and the National Center for Accessible Media to make educational software and distance learning accessible for people with disabilities.
6. **Making the Web accessible:** The National Institute on Disability and Rehabilitation Research will expand its funding for a joint project with industry to make the Web more accessible for people with disabilities.

September 14, 2000

MEMORANDUM FOR MARIA ECHAVESTE

FROM: Mary Beth Cahill, Assistant to the President and
Director of Public Liaison

Gene Sperling, Assistant to the President and
Director, National Economic Council

RE: Manifest for Disability Digital Divide Trip

I. DISABILITY COMMUNITY REPRESENTATIVES

Rationale for Choices: The Disability Community is diverse, with a multitude of different types of disabilities. An effective approach to selecting people for the Manifest would be types of disabilities. Representing people who have physical disabilities, people who are Deaf, and people who are blind would be ideal. (It would also be relevant to represent the importance of cognitive impairments in relation to technology access.)

Top Three Recommendations:

Judy Brewer: Director of the Web Accessibility Initiative (WAI) at the World Wide Web Consortium. Boston, MA. Brewer is a leading expert on Web Accessibility. WAI is spearheading an international effort to adopt standards for web design that would make the Internet accessible to and usable by people with disabilities, including people who are blind and visually impaired. (Person with a physical disability.)

I. King Jordan: President of Gallaudet University. Washington, DC. Jordan is a major figure in the disability rights movement because of his role in the Deaf President Now movement, which resulted in his selection to be the first Deaf president of Gallaudet in 1988. This in turn helped provide symbolic momentum for the ADA. He is not a technology expert, though he is fluent in all subjects pertaining to the Deaf Community. No person is more recognizable than him as a leader for the Deaf. And Jordan is arguably the only figure in the disability community who has a stature approaching Justin Dart. (Deaf.)

Carl Augusto: President of the American Foundation for the Blind (AFB). New York, NY. Augusto has led AFB to make technology a driving focus of the organization's mission. He is a recognized leader in the blind community, and effectively avoids the inter-organizational conflict between the National Federation of the Blind and the American Council of the Blind (the two groups splintered and tensions remain). (Blind.)

Alternatives:

Paul Schroeder: Vice President of Government Relations, American Foundation for the Blind. Washington, DC. Prior to joining AFB's Washington office, Schroeder served as Director of AFB's National Technology Program and Director of the AFB Midwest office in Chicago. He is also president of the Alliance for Public Technology and Vice President of the Association for Access. Although Schroeder is a better expert in technology than President Augusto, protocol would probably support prioritizing Augusto. (Blind.)

Andy Imparato. President and the CEO, American Association of People with Disabilities. Washington, DC. Imparato joined AAPD a year ago, and is helping it to become the leading umbrella organization for people with disabilities. He helps diversify the typical physical-disability-oriented community by being a person with a psychiatric disability. Although he is not a technology expert, he brings a powerful and articulate understanding of the importance of income inequity issues for access to technology. (Person with a psychiatric disability.)

Deborah Kaplan. Executive Director, World Institute on Disability (WID). Berkeley, CA. Kaplan is a leading technology expert, particularly in regard to the affordability and financing of technology. She has served as a member of the Administration's Advisory Council for the National Information Infrastructure and is a Co-Founder of the Alliance for Public Technology, which has the mission of promoting the benefits of the Information Age for all segments of society. (Person with a physical disability.)

Accommodations Issues:

Deaf. A person who is Deaf must be permitted to bring a sign language interpreter. Although this poses questions about seating capacity, it might be a great "First" for a person who is Deaf to travel with the President.

Blind. No special accommodations are required beyond the etiquette of interaction, except that the individual must be allowed to keep his guide dog nearby or a cane within reach.

Physical Disability. Depending on the type of physical disability, some individuals who use chairs can walk independently or transfer on their own, while others would typically need to be transferred to an "aisle chair," a seat which is narrow enough to fit within the aisles of an ordinary airplane. If there is no level entry from the terminal to the plane, a separate lifting mechanism would be required. Air Force One staff have indicated a catering truck could be used for one or two people using wheelchairs.

II. BUSINESS AND INDUSTRY REPRESENTATIVES

Tim Berners-Lee: Director of the World Wide Web Consortium. Boston, MA. Berners-Lee invented the Web in 1990. We will be giving a grant to this organization to improve the accessibility of the World Wide Web for people with disabilities. Tim has received a great deal of positive coverage in the press for working to improve the World Wide Web, as opposed to using his experience and innovations merely to profit from it financially. Tim is British.

Ralph Shrader: CEO, Booz-Allen. McLean, VA. Under Shrader's leadership, Booz-Allen has become a model employer of people with disabilities, sponsoring forums on disability issues and showcasing assistive technology. The company is kicking off an internship program for people with disabilities, who will be placed in paid internships at sponsoring corporations. The internship program is a potential announcement for the trip. Booz-Allen has offered to host a half-day working session to follow-up on the President's trip and prepare plans of action. Shrader was recently featured in a *Business Week* online column on assistive technology by John Williams, which commended Shrader and his company for leadership in disability issues.

August 31, 2000

MEMORANDUM FOR THE PRESIDENT

FROM: Gene Sperling, Tom Kalil
Mary Beth Cahill, Jonathan Young
Maria Echaveste
Stephanie Street

RE: September 21st event on technology for people with disabilities

I. SUMMARY:

During your April "digital divide" tour, you announced that an additional part of the tour would focus on the potential of information and communications technologies to expand opportunities for people with disabilities. This trip is now scheduled for September 21st. For the past seven months we have worked extensively with the disability community and experts in the academic and corporate sectors to understand how best to bridge the "digital divide" for people with disabilities. This memo identifies our proposed objectives for the trip, recommends a site venues, and outlines potential deliverables.

II. TRIP OBJECTIVES:

We have identified the following five goals for bridging the "digital divide" among people with disabilities. As with previous trips, you can help meet these objectives by calling attention to these issues and announcing concrete commitments by the government, industry, and non-profit organizations.

1. **Existing IT products and services should be designed from the beginning to be more accessible for people with disabilities:** Currently, not all IT products and services are accessible for people with disabilities. For example, a blind person who uses a screen-reader can't readily use the Web if a Web page uses graphics without also including text descriptions.
2. **We should improve the state-of-the-art of assistive technology:** Through continued research and development, we can make it even easier for people to use IT -- by promoting the concept of "universal design" as well as developing specialized technologies, such as operating a computer through "brain waves" or "eye gaze."
3. **Employers should take advantage of IT to expand employment for people with disabilities:** The unemployment rate for people with disabilities is much higher than the

general population. Accessible IT could make it easier for employers to hire people with disabilities and allow more people with disabilities to work from their home. People with disabilities can thereby help fill the demand for high-skilled IT employees.

4. **Our existing "digital divide" initiatives should be designed so that people with disabilities can take advantage of them:** For example, our national network of Community Technology Centers should be designed to be accessible to people with disabilities.
5. **We should address inequities in access to assistive technology:** Many of the innovative technologies are simply too expensive for low or moderate-income households. Moreover, many people with disabilities cannot afford even basic computer equipment.

III. RECOMMENDATION

Your trip would focus on the design of technology and how technology can improve the lives of people with disabilities:

- You would visit a successful program that is using technology to allow people with disabilities to work, improve their health care, or pursue a science or engineering degree at a university. You could also do a roundtable with CEOs and people from the disability community to discuss what steps the United States must take to ensure that all Americans with disabilities are benefiting from these new technologies. You would see demonstrations of these new technologies such as universally accessible web designs and specialized assistive technology. We recommend **Flint, Michigan**.

Would you like to travel to Flint, Michigan?

_____Yes

_____No

_____Discuss

IV. ATTACHMENTS

Potential Deliverables

Background on Flint, MI

POTENTIAL DELIVERABLES:

We are still working on and expect additional deliverables, but these are some of the possibilities. The disability community has urged us to focus on getting the private sector to make their products more accessible, not merely making specific financial commitments.

1. **High-tech CEOs adopt a company-wide accessibility policy:** Currently, very few high-tech companies have adopted an explicit corporate policy on accessibility. High-tech CEOs would commit to implement "best practices" such as:
 - Training their workers to develop accessible products and services;
 - Giving their developers adequate resources to design accessible products and services;
 - Identifying and fixing accessibility problems in new versions of their hardware and software; and
 - Supporting research and development to improve the state-of-the-art of assistive technology.
2. **University presidents commit to expanding research and education on accessibility:** Presidents of the leading research universities would commit to:
 - Ensuring that computer scientists and engineers receive training on accessibility;
 - Expanding the number of faculty who conduct research on accessibility; and
 - Ensuring that university online resources are accessible to people with disabilities.
3. **Companies agree to increase employment of people with disabilities:** Employers would agree to:
 - Targeting disability as part of their diversity recruitment goals;
 - Making assistive technology available to their employees; and
 - Promoting the recruitment of youth with disabilities through summer internships and mentorships.
4. **Commission on Assistive Technology:** We would announce that foundations are supporting a blue-ribbon commission of experts in industry and the disability community to develop policy recommendations in some key areas, such as financing assistive technology for people who may not be able to afford it and working with colleges and universities to improve education and outreach about accessible technology.

5. **Making educational content accessible:** The Department of Education will provide a grant to industry and the National Center for Accessible Media to make educational software and distance learning accessible for people with disabilities.
6. **Making the Web accessible:** The National Institute on Disability and Rehabilitation Research will expand its funding for a joint project with industry to make the Web more accessible for people with disabilities.

BACKGROUND ON FLINT, MI:

Flint has two model programs that increase employment for people with disabilities, including a focus on technology, which are integrated with their broader worker training programs.

- **Career Alliance, Inc.** Opened in 1998, this Workforce Investment Act (WIA) One-Stop Service Center features the latest in assistive technology for individuals with any type of disability, including voice recognition software, screen reader software, and magnified screens and information in alternative formats. At the One-Stop, individuals with disabilities are able to make informed choices about the employment, training and support services they need. The One-Stop Center is the most inclusive and accessible in the state, servicing Genesee and Shiawassee Counties and its 86,000 residents with disabilities. The Michigan Workforce Development Board that oversees One-Stop Centers across the state, which is chaired by a person with a disability, has formed a Disability Council to educate employers on the advantages of employing individuals with disabilities. The Workforce Board is also working to implement the Ticket to Work and Work Incentives Improvement Act (TWIIA) in Michigan.
- **Disability Network.** This independent living center is operated by the Chair of Michigan's Workforce Development Board, governed and staffed by people with disabilities, and supported by AmericCorps volunteers. A new Access Center is being created at the Disability Network, which will be a neighborhood entry point to the new \$34 million high-tech Regional Technology Center in Flint. The Disability Network's Access Center, created in partnership with Mott Community College and the U.S. Department of Education, will feature assistive and adaptive technology on high-tech computers, using high speed T1 access lines to the Internet, including sip & puff controls and Eye-gaze technology. The Access Center will offer a newly-developed Assistive Technology certification program, not available anywhere else in the United States. It will also be an integrated setting available to all people in the surrounding neighborhoods, including citizens with disabilities.

Background for September 21st trip - Creating Digital Opportunity for People with Disabilities

I. MESSAGE: With the right commitments from government and the private sector, information technology can be a powerful tool for improving the quality of life and expanding employment opportunities for people with disabilities.

II. GOALS: In cooperation with the disability community, the Administration has developed the following 5 goals that will help bridge the digital divide and create digital opportunity for Americans with disabilities:

1. **Existing IT products and services should be designed from the beginning to be more accessible for people with disabilities:** Currently, not all IT products and services are accessible for people with disabilities. For example, someone who is blind can't use the Web if a Web page uses graphics without also including text.
2. **We should improve the state-of-the-art of assistive technology:** Through research and development, we can make it even easier for people to use IT - through technologies such as voice recognition for people who can't use a keyboard.
3. **Employers should take advantage of IT to expand employment for people with disabilities:** The unemployment rate for people with disabilities is much higher than the general population. Accessible IT could make it easier for employers to hire people with disabilities and allow more people with disabilities to work from their home.
4. **Our existing "digital divide" initiatives should be designed so that people with disabilities can take advantage of them:** For example, our national network of Community Technology Centers should be designed to be accessible to people with disabilities.
5. **We should address inequities in access to assistive technology:** There are amazing technologies (e.g., people who are paralyzed can operate computers through the use of eye-gaze or brain waves) that are simply too expensive for low or moderate-income households.

III. PROPOSED SEQUENCE OF EVENTS

1. **President sees demonstration of technology that is accessible to people with disabilities** (30-45 minutes). Proposed Location: Disability Network Access Center (the Disability Network is an independent living center; the Technology Access Center is being opened on the President's visit).
2. **Speaking program** (30-45 minutes). Proposed Location: Career Alliance One-Stop Service Center (a partner in implementing the Workforce Investment Act of 1998).

August 31, 2000

MEMORANDUM FOR THE PRESIDENT

FROM: Gene Sperling, Tom Kalil
Mary Beth Cahill, Jonathan Young
Maria Echaveste
Stephanie Street

RE: September 21st event on technology for people with disabilities

I. SUMMARY:

During your April "digital divide" tour, you announced that an additional part of the tour would focus on the potential of information and communications technologies to expand opportunities for people with disabilities. This trip is now scheduled for September 21st. For the past seven months we have worked extensively with the disability community and experts in the academic and corporate sectors to understand how best to bridge the "digital divide" for people with disabilities. This memo identifies our proposed objectives for the trip, recommends several options for site venues, and outlines potential deliverables.

II. TRIP OBJECTIVES:

We have identified the following five goals for bridging the "digital divide" among people with disabilities. As with previous trips, you can help meet these objectives by calling attention to these issues and announcing concrete commitments by the government, industry, and non-profit organizations.

1. **Existing IT products and services should be designed from the beginning to be more accessible for people with disabilities:** Currently, not all IT products and services are accessible for people with disabilities. For example, a blind person who uses a screen-reader can't readily use the Web if a Web page uses graphics without also including text descriptions.
2. **We should improve the state-of-the-art of assistive technology:** Through continued research and development, we can make it even easier for people to use IT -- by promoting the concept of "universal design" as well as developing specialized technologies, such as operating a computer through "brain waves" or "eye gaze."
3. **Employers should take advantage of IT to expand employment for people with disabilities:** The unemployment rate for people with disabilities is much higher than the

general population. Accessible IT could make it easier for employers to hire people with disabilities and allow more people with disabilities to work from their home. People with disabilities can thereby help fill the demand for high-skilled IT employees.

4. **Our existing "digital divide" initiatives should be designed so that people with disabilities can take advantage of them:** For example, our national network of Community Technology Centers should be designed to be accessible to people with disabilities.
5. **We should address inequities in access to assistive technology:** Many of the innovative technologies are simply too expensive for low or moderate-income households. Moreover, many people with disabilities cannot afford even basic computer equipment.

III. EVENT DESCRIPTION

A. MORNING EVENT

Message

- We need to ensure that we develop IT products and services that are accessible to and usable by everyone, including people with disabilities.
- Making IT accessible to people with disabilities will help everyone (especially, for example, as people age), just as curb-cuts help families with baby strollers.

Sequence Of Events

- You would see a demonstration of accessible technologies. This could include how to design accessible web pages and design an on-line course that uses captioning and video description. This demonstration could also feature a specialized assistive technology such as the "Eye-Gaze" system. This amazing technology was demonstrated at the Vice President's home as part of the 10th anniversary of the ADA. By "reading" eye movement, this technology enables people with significant physical disabilities to operate a computer and search the Internet as well as control one's environment (e.g. lights and doors). You know someone who uses one of these systems -- Joe Martin, who has Lou Gehrig's disease and works at NationsBank in Charlottesville, North Carolina.
- There would be significant media interest in this and we would work with the networks to ensure that they had good footage of mainstream and assistive technologies.
- Following the demonstration, we would do a speaking program with people from the high-tech industry and the disability community. You would announce most of the deliverables at the morning event.

B. AFTERNOON EVENT

Message

- Information technology can help people with disabilities increase their participation in the workforce and go to college. If we want to be able to continue to grow our economy, we need to ensure that all people with disabilities have these opportunities. Making technologies more widely available can help us meet the objectives of the Workforce Investment Act of 1988 and the Ticket to Work and Work Incentives Improvement Act of 1999.

Sequence Of Events

- You would tour the program and meet with the people who are benefiting from it.
- We could host a roundtable discussion with employers, people with disabilities, and experts to discuss how best to increase the employment rate of people with disabilities and make IT more affordable to all Americans.

IV. RECOMMENDATIONS

Ideally, your trip would consist of two destinations, one focusing on the design of technology and the other focusing on how technology can improve the lives of people with disabilities:

- The first stop would focus on the information technologies that can be used by people with disabilities. At this venue you could see demonstrations of universally accessible web design and specialized assistive technology. We recommend **Boston, Massachusetts**.

Would you like to travel to Boston, Massachusetts?

_____Yes

_____No

_____Discuss

- At the second stop, you would visit a successful program that is using technology to allow people with disabilities to work, improve their health care, or pursue a science or engineering degree at a university. You could also do a roundtable with CEOs and people from the disability community that would discuss what steps the United States must take to ensure that all Americans with disabilities are benefiting from these new technologies. We recommend **Atlanta, Georgia or Flint, Michigan**.

Do you prefer to travel to Atlanta, GA or Flint, MI?

_____Atlanta, GA

_____Flint, MI

_____Discuss

V. ATTACHMENTS

Potential Deliverables

Background on Site Options

POTENTIAL DELIVERABLES:

We are still working on and expect additional deliverables, but these are some of the possibilities. The disability community has urged us to focus on getting the private sector to make their products more accessible, not merely making specific financial commitments.

1. **High-tech CEOs adopt a company-wide accessibility policy:** Currently, very few high-tech companies have adopted an explicit corporate policy on accessibility. High-tech CEOs would commit to implement "best practices" such as:
 - Training their workers to develop accessible products and services;
 - Giving their developers adequate resources to design accessible products and services;
 - Identifying and fixing accessibility problems in new versions of their hardware and software; and
 - Supporting research and development to improve the state-of-the-art of assistive technology.
2. **University presidents commit to expanding research and education on accessibility:** Presidents of the leading research universities would commit to:
 - Ensuring that computer scientists and engineers receive training on accessibility;
 - Expanding the number of faculty who conduct research on accessibility; and
 - Ensuring that university online resources are accessible to people with disabilities.
3. **Companies agree to increase employment of people with disabilities:** Employers would agree to:
 - Targeting disability as part of their diversity recruitment goals;
 - Making assistive technology available to their employees; and
 - Promoting the recruitment of youth with disabilities through summer internships and mentorships.
4. **Commission on Assistive Technology:** We would announce that foundations are supporting a blue-ribbon commission of experts in industry and the disability community to develop policy recommendations in some key areas, such as financing assistive technology for people who may not be able to afford it and working with colleges and universities to improve education and outreach about accessible technology.

5. **Making educational content accessible:** The Department of Education will provide a grant to industry and the National Center for Accessible Media to make educational software and distance learning accessible for people with disabilities.
6. **Making the Web accessible:** The National Institute on Disability and Rehabilitation Research will expand its funding for a joint project with industry to make the Web more accessible for people with disabilities.

BACKGROUND ON SITE OPTIONS:

Boston, Massachusetts

There are two very important accessibility projects in the Boston area:

- MIT is the home of the World Wide Web Consortium's Web Accessibility Initiative (WAI). The World Wide Web Consortium is the industry consortium that develops the standards for the Web. WAI's guidelines, if adopted widely, will make the web accessible for people with disabilities. For example, web designers can use the tab key and text descriptions of graphics to provide access to blind people who rely on screen-readers to "read" computer text. The Department of Education is planning to increase its support for this project. (The World Wide Web Consortium is run by Tim Berners-Lee, the man who invented the Web and has chosen to dedicate his efforts to improving it.)
- WGBH is the home of the National Center for Accessible Media, which is the national leader in closed captioning and descriptive video services. The Department of Education will be giving the National Center for Accessible Media a grant to develop standards to make "e-learning" accessible for people with disabilities.

Atlanta, Georgia

There are a number of excellent disability programs in Georgia that would make Atlanta a suitable venue, including:

- **Shepherd Center Telerehabilitation Program.** The Shepherd Center is a specialty hospital serving people with disabilities resulting from impairments that affect the central nervous system, such as spinal cord injuries and brain injuries. Through grants from the Department of Commerce and the Department of Education, and partnerships with the private sector, the Shepherd Center is now expanding the scope of patient treatment through telerehabilitation. Under this new program, patients will be provided a personal computer with a customized platform supporting videoconferencing, remote monitoring of vital health measurements, Internet access, and multimedia instructional materials. The program will improve community reintegration (including return to work), bridge the gap of services for people in remote areas, reduce secondary complications, and incur lower overall health care and support costs.
- **Georgia High School/High Tech.** With both public and private funding and the cooperation of businesses, federal and state agencies, not-for-profit organizations, and local school districts, High School/High Tech uses site visits, mentoring, shadowing, and paid summer internships to provide students with opportunities to learn more about careers in scientific, engineering and technology-related fields. Georgia's HS/HT program is one of the most active and extensive programs in the country. One group of students was honored on Space Day 2000 at the Air and Space Museum for its successful

design and execution of a Space Shuttle butterfly experiment. Although this model HS/HT site is in Albany, Georgia, we may be able to announce a new site in Atlanta.

Flint, Michigan

Flint has two model programs that increase employment for people with disabilities, including a focus on technology, which are integrated with their broader worker training programs.

- **Career Alliance, Inc.** Opened in 1998, this Workforce Investment Act (WIA) One-Stop Service Center features the latest in assistive technology for individuals with any type of disability, including voice recognition software, screen reader software, and magnified screens and information in alternative formats. At the One-Stop, individuals with disabilities are able to make informed choices about the employment, training and support services they need. The One-Stop Center is the most inclusive and accessible in the state, servicing Genesee and Shiawassee Counties and its 86,000 residents with disabilities. The Michigan Workforce Development Board that oversees One-Stop Centers across the state, which is chaired by a person with a disability, has formed a Disability Council to educate employers on the advantages of employing individuals with disabilities. The Workforce Board is also working to implement the Ticket to Work and Work Incentives Improvement Act (TWIIA) in Michigan.
- **Disability Network.** This independent living center is operated by the Chair of Michigan's Workforce Development Board, governed and staffed by people with disabilities, and supported by AmericCorps volunteers. A new Access Center is being created at the Disability Network, which will be a neighborhood entry point to the new \$34 million high-tech Regional Technology Center in Flint. The Disability Network's Access Center, created in partnership with Mott Community College and the U.S. Department of Education, will feature assistive and adaptive technology on high-tech computers, using high speed T1 access lines to the Internet, including sip & puff controls and Eye-gaze technology. The Access Center will offer a newly-developed Assistive Technology certification program, not available anywhere else in the United States. It will also be an integrated setting available to all people in the surrounding neighborhoods, including citizens with disabilities.

ELECTRONIC COMMERCE WORKING GROUP

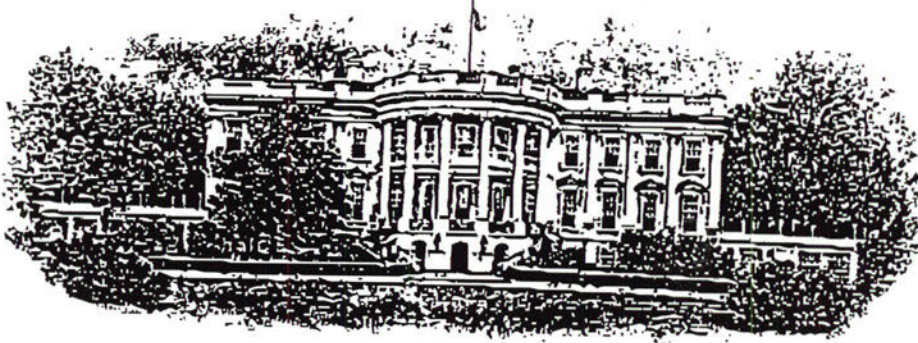
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MESSAGE:

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MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES

SUBJECT: USE OF INFORMATION TECHNOLOGY TO IMPROVE
OUR SOCIETY

The Internet and other information and communications technologies are changing the way we work, learn, communicate with each other, and do business. These technologies are shaping our economy and our society in the same way that the steam engine and electricity defined the Industrial Age.

In recent years, information technology has driven the U.S. economy. Businesses are scrambling to use the Internet to increase productivity, boost exports, cut the time required to develop new products, and forge closer relationships with customers and suppliers. This Administration has pursued a market-led approach to global electronic commerce, that relies whenever possible on private sector leadership and seeks to eliminate legal and regulatory barriers to electronic commerce while protecting the public interest.

But the Internet has the potential to enhance our civil society as well as commerce. Used creatively, the Internet and information technology can be a powerful tool for tackling some of our toughest social challenges as well as fostering economic growth. Information technology can and is being used to make it easier for working adults to acquire new skills, increase access to healthcare in isolated rural communities, improve the quality of life for people with disabilities, and strengthen our democracy.

This Administration has led the effort to explain and support the commercial and societal benefits of information technology to the American people. However, we can and must do more. To that end, I am directing executive department and agency heads in this memorandum to take certain actions. As they carry out these actions, they should: (a) adopt policies that will remove barriers to private sector investment in Internet applications; (b) explore partnerships with companies, state, local, and tribal governments, and other entities, such as non-profit organizations and universities; (c) explore innovative

mechanisms for fostering a national discussion on the potential of the electronic society; (d) consider other policies to promote the electronic society, such as the establishment of national goals; and (e) review the recommendations of the President's Information Technology Advisory Committee, particularly as they relate to support for Information Technology applications with broad societal benefits.

Therefore, to further promote the broader social benefits of the Information Age to the American people, I direct the officials in this memorandum to take the following actions:

1. The Secretary of Health and Human Services shall identify additional steps that can be taken to promote expanded access to higher quality, cost-effective, health care to underserved rural communities and inner city clinics, and other health care applications of information technology.
2. The Secretary of Education shall support and encourage states and local communities to make "school report cards" available on the Internet. The Secretary of the Interior shall make it possible for "school report cards" on Bureau of Indian Affairs schools and tribally controlled schools to be available on the Internet.
3. The Secretaries of Education and Labor shall work with states and institutions of higher education to remove legal and regulatory barriers to high-quality distance learning, to increase awareness of the availability of distance learning as an alternative means of education and training, and to find ways to promote the earning of credentials through distance learning. The Secretary of Education shall assist the Tribal Colleges and Universities in developing associate and baccalaureate programs in information technology, using innovative distance learning technology.
4. The Secretary of Education shall propose the next phase of the Administration's Educational Technology Initiative. The next phase should address teacher training, the integration of technology in the curriculum, the evaluation of technology, the market for educational software and web content, the need for more multimedia computers in the classroom, and the need for investments in educational technology research and development.

5. The Secretary of Labor shall determine how telecommuting might be used to help more disabled Americans get jobs and to provide jobs for Americans located in geographic regions outside traditional commuting areas, including isolated tribal communities.
6. The Secretary of Education and the Director of the National Science Foundation shall develop a research agenda for making the Internet and information technology more usable by persons with disabilities. The Secretary of Commerce shall encourage the private sector to make Web content, software, and development tools more accessible for people with disabilities by adopting technical standards consistent with the Web Accessibility Initiative.
7. The Administrator of the Environmental Protection Agency shall develop a national strategy for promoting environmental applications of information technology (such as disseminating information about manufacturing techniques that reduce pollution, and increasing the timeliness of environmental information).
8. The Secretary of Agriculture shall identify services that can be delivered electronically to rural Americans (such as the results of federally-funded research at our nation's land-grant universities), and develop the policies needed to promote the availability of advanced telecommunications services in rural and tribal communities.
9. The Secretary of Commerce shall identify policies that will encourage more effective use of information technology by non-profit organizations.
10. The Secretary of the Interior shall identify policies that will accelerate the use of unclassified geospatial information systems at the state, local, and tribal level.
11. The Director of the Federal Emergency Management Agency shall work with research universities and the private sector to apply advances in information technology to managing the consequences of natural and man-made disasters.
12. The Secretary of the Smithsonian Institution, the Director of the National Science Foundation, the Director of the National Park Service, and the Director of the Institute of Museum and Library Services shall work with the private sector and cultural and educational institutions across the country to create a Digital Library of Education to house this country's cultural and educational resources.

13. The Attorney General shall work with federal, state, local, and tribal law enforcement agencies to use information technologies to make our Nation's communities safer.
14. The Director of the National Science Foundation, working with appropriate Federal agencies, shall conduct a one year study examining the feasibility of online voting.
16. Items 1-14 of this memorandum and my July 1, 1997 and November 30, 1998 memoranda shall be conducted subject to the availability of appropriations, consistent with the agencies' priorities and my budget, and to the extent permitted by law.
17. The Vice President shall continue his leadership in coordinating the United States Government's electronic commerce strategy. Further, I direct that the heads of agencies report to the Vice President and to me on their progress in meeting the terms of the memorandum, through the Electronic Commerce Working Group in its annual report.

MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES

SUBJECT: Electronic Government

This administration has put a wealth of information online. However, when it comes to most Federal services, it can still take a paper form and weeks of processing for something as simple as a change of address.

While government agencies have created "one-stop-shopping" access to information within their agency web sites, these efforts have not uniformly been as helpful as they could be to the average citizen, who first has to know which agency provides the service he or she needs. There has not been sufficient effort to provide government information by type or by category of information and service -- rather than by agency -- in a way that is meaningful for people's needs.

Moreover, as public awareness and Internet usage increase, the demand for on-line government interaction with simplified and standardized ways to access all government information and services becomes increasingly important. At the same time, the public must have confidence that their online communications with the government are secure and protective of their privacy.

Therefore, to help our citizens gain one-stop-access to existing government information and services, and to provide better, more efficient, government services and increased government accountability to its citizens, I hereby direct the officials in this memorandum, in conjunction with the private sector as appropriate, to take the following actions:

1. The Administrator of the General Services Administration, in coordination with the National Partnership for Reinventing Government, the Chief Information Officers' Council, the Government Information Technology Services Board, and other appropriate agencies shall promote access to government information organized not by agency, but by the type of service or information that people may be seeking and where the data are identified and organized in a way that makes it easier for the public to find the information it wants.

2. The heads of executive departments and agencies ("agencies") shall, to the maximum extent possible, make available online, by December 2000, the forms needed for the top 500 government services used by the public. By October 2003, transactions with the Federal Government should be available online for actual processing of services online under the Government Paperwork Elimination Act, where appropriate. To achieve this goal, the Director of the Office of Management and Budget shall oversee agency development of responsible strategies to make transactions available online.
3. The heads of agencies shall promote the use of electronic commerce, where appropriate, for faster, cheaper ordering on Federal procurements that results in savings to the taxpayer.
4. The heads of agencies shall continue to build good privacy practices into their web sites by posting privacy policies as directed by the Director of the Office of Management and Budget and by adopting and implementing information policies to protect children's information on web sites that are directed at children.
5. The head of each agency shall permit greater access to its officials by creating a public electronic mail address through which citizens can contact the agency with questions, comments, or concerns. The heads of each agency shall also provide disability access on federal web sites.
6. The Secretaries of Health and Human Services, Education, Veterans Affairs, and Agriculture, the Director of the Social Security Administration, and the Director of the Federal Emergency Management Agency, working closely with other Federal agencies that provide benefit assistance to citizens, shall make a broad range of benefits and services available through private and secure electronic use of the Internet.
7. The Administrator of the General Services Administration, in coordination with the Secretary of the Treasury, the Secretary of Commerce, the Government Information Technology Services Board, the National Partnership for Reinventing Government, and other appropriate agencies and organizations, shall assist agencies in the development of private, secure, and effective communication across agencies and with the public, through the use of public key technology. In light of this goal, agencies are encouraged to issue, in coordination with the General Services Administration, a government-wide minimum of 100,000 digital signature certificates by December 2000.

8. The heads of agencies shall develop a strategy for upgrading their respective agency's capacity for using the Internet to become more open, efficient, and responsive, and to more effectively carry out the agency's mission. At a minimum, this strategy should involve:
 - (a) expanded training of Federal employees, including employees with policy and senior management responsibility;
 - (b) identification and adoption of "best practices" implemented by leading public and private sector organizations;
 - (c) recognition for Federal employees who suggest new and innovative agency applications of the Internet;
 - (d) partnerships with the research community for experimentation with advanced applications; and
 - (e) mechanisms for collecting input from the agency's stakeholders regarding agency use of the Internet.
9. Items 1-8 of this memorandum and my July 1, 1997 and November 30, 1998 memoranda shall be conducted subject to the availability of appropriations and consistent with agencies' priorities and my budget, and to the extent permitted by law.
10. The Vice President shall continue his leadership in coordinating the United States Government's electronic commerce strategy. Further, I direct that the heads of executive departments and agencies report to the Vice President and to me on their progress in meeting the terms of this memorandum, through the Electronic Commerce Working Group in its annual report.