

Southwest Region University Transportation Center

EXPLORATORY ANALYSIS OF
TELECOMMUTING PROJECTS INVOLVING
PERSONS WITH DISABILITIES

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by

James E. Jarrett

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EXECUTIVE SUMMARY

Telecommuting projects generally have been established to assist in meeting air quality goals or to help reduce traffic congestion. An increasing number of projects are being created for non-transportation objectives as well: to assist employees with child and elder care, to cope with a shortage of office space, to reduce absenteeism, to bring jobs to non-metropolitan areas, and especially, to increase organizational productivity. Telecommuting is also being used by employers to accommodate the disabilities of employees.

Passed in 1990, the Americans with Disabilities Act (ADA) requires that most private employers provide reasonable work site accommodations for persons with disabilities. Because of ADA, employers have become more aware of different types of accommodations. In addition, major escalation in workers' compensation costs to employers has forced companies to examine approaches which could assist injured workers to return to work in less time. Telecommuting has a potential for addressing both needs.

This analysis examined telecommuting projects in the United States which were initiated to provide accommodation under ADA, serve the employment needs of employees with disabilities, and reemploy employees on workers' compensation. Projects from both public and private sectors were identified through a nationwide search conducted primarily during the summers of 1992 and 1993. When projects were identified, staff gathered a variety of data elements about the projects and its participants. Resource limitations precluded site visits, and no information would be verified independently.

Descriptive profiles are presented for projects at the American Express Banks, Helping Hands, Lift, Inc., The Midwest Institute for Telecommuting Education, Phoenix Transit System, the Tennessee Valley Authority, the U.S. Office of Personnel Management, and the Wisconsin Department of Transportation. Shorter descriptions are provided of projects at 18 other private and public employers. The review suggests that (1) telecommuting involving persons with disabilities has been extensive; (2) projects usually have not been started because of the Americans with Disabilities Act; and (3) most telecommuting involving persons with disabilities, to date, has occurred primarily because of efforts by specialized, private, non-profit organizations to train and place individuals.

Telecommuting projects involving persons with disabilities may encounter philosophical resistance from some disability advocacy groups. Segregation of persons with disabilities within society has been so widespread that any off-site employment arrangement is suspect. Various safeguards to minimize isolation were identified in projects, but because there have been no data collected from telecommuters with disabilities, regarding their satisfaction on group integration, it is unknown if such safeguards have proven

adequate. Ensuring that telecommuting does not segregate employees with disabilities from other employees is perhaps the key issue which needs to be resolved before telecommuting can reach its full potential as a voluntary work arrangement for employers and persons with disabilities.

ABSTRACT

Telecommuting projects, besides being established for transportation objectives, may enable employers to accommodate the disabilities of qualified applicants, or existing employees. This project identified telecommuting projects initiated to provide accommodations under ADA, those established prior to the passage of ADA to serve the employment needs of employees with disabilities, and those created to reemploy employees on workers' compensation. Principal findings were: (1) Telecommuting involving persons with disabilities has been extensive, yet data are scarce and unsystematically collected; (2) Projects usually have not been started because of the Americans with Disabilities Act; and (3) Most telecommuting involving persons with disabilities has occurred primarily because of efforts by specialized, private, non-profit organizations to train and place individuals. Telecommuting for persons with disabilities appears to be on the verge of a major expansion if appropriate safeguards are established to prevent disabled employees from being segregated from other employees. This research will be of most use to human resource professionals and those in the disabled community seeking methods of enhancing the employment of individuals with disabilities. The cases identified in the report can be used as potential telecommuting prototypes for future, larger projects.

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CHAPTER 1 INTRODUCTION

1.1 RESEARCH OBJECTIVES

Telecommuting, the practice of working at home, or at a different (satellite) work place site, several times a week has become more prevalent because of a convergence of trends. There has been an exponential increase in knowledge-based jobs utilizing computers, an expansion of service, rather than manufacturing, jobs, and continuing growth in the number of independent workers and consultants. The greatest impetus, however, has been enforcement of the federal Clean Air Act in certain cities not in compliance with air quality standards.

Telecommuting projects, besides being established for transportation objectives, have been started for other reasons as well: to cope with a shortage of office space, to reduce absenteeism, to bring jobs to non-metropolitan areas, and especially, to increase organizational productivity. Telecommuting also can be an approach by which employers may accommodate the disabilities of qualified applicants, or existing employees. Because of the accommodations requirements in the Americans with Disabilities Act (ADA), the next several years may be an opportune time to use telecommuting for the benefit of persons with disabilities--when it is appropriate for both employee and employer. ¹

The purpose of this project was to examine the potential of telecommuting for persons with disabilities, that is, to determine the conditions under which telecommuting has served as a useful employment accommodation. As there was no pre-existing body of information, this effort was designed to collect information and provide observations which would prove helpful in future research and future telecommuting projects, both in Texas and elsewhere. By compiling heretofore disparate information and by focusing on the unique needs of telecommuters who have disabilities, the research should add to the growing body of literature about telecommuting.

CHAPTER 2 DATA COLLECTION

The major project task centered on identification of current and planned telecommuting projects devoted exclusively to persons with disabilities and to telecommuting projects in which persons with disabilities have been participating along with able-bodied telecommuters. No source of systematic empirical data could be located from telecommuting databases or disability workforce statistics. Therefore, a nationwide search was conducted of public and private employers and not-for-profit organizations, primarily during the summers of 1992 and 1993.

Three types of projects were sought:

- those initiated to provide accommodations under ADA;
- those established prior to the passage of ADA to serve the employment needs of employees with disabilities; and
- those telecommuting projects created to reemploy employees on workers' compensation.

When projects were identified, staff gathered information, to the extent possible, about the (1) number of participants; (2) types of jobs and occupations; (3) nature of individuals' impairments; (4) project history; (5) evaluation measures and reports, if any; (6) impetus for starting the project; and (7) project characteristics, if any, which may restrict replication of the project in other locations. Resource limitations restricted the search process to collection of information only from project directors. Site visits and interviews of telecommuters were not possible, nor could any of the information be verified independently.

It must be noted at the outset that information described in this report undoubtedly underestimates the extent of telecommuting by persons with disabilities for two reasons. First, numerous large private corporations have been cited in articles as having telecommuting projects. Pacific Bell, for instance, is reported to have 1,500 telecommuters in California. However, obtaining information from many of the larger firms proved difficult, and as a result, this report describes only those organizations in which staff could obtain information directly. A second reason for underestimation is that the majority of projects have yet to include disability as a demographic data element. Because of that, project directors often could provide only anecdotal information about participants with disabilities.

A description of telecommuting projects and organizations promoting telecommuting for persons with disabilities are presented in the next two sections. Section III profiles several projects in detail while the subsequent section describes succinctly a number of other organizations.

CHAPTER 3 PROJECT PROFILES

3.1 AMERICAN EXPRESS BANKS NEW YORK, NEW YORK

In 1982, American Express Banks (AEB) developed a program to hire persons with disabilities in their Off-Site Processing Center to perform data processing and other clerical tasks. They began the program primarily for public relations purposes. Ten employees with disabilities were hired initially, but because of staff reductions, the current staff level is four. One individual has multiple sclerosis, another has paraplegia, a third person has a bi-polar disorder, and the fourth is an amputee. All have full health benefits.

All telecommute more or less full-time. Office employment is not an option because of very limited office space. None of the four has expressed an interest in working within the office setting even if space were available. Telecommuters stay in touch through frequent conference calls and occasional trips to the office, either for meetings or to replace employees who are absent. AEB pays for all costs associated with telecommuting, including transportation to the office for meetings. One employee requires an ambulance-type vehicle for transportation, which is paid for by AEB. Although this employee has expressed interest in working in the office part-time, neither she or AEB feel they can afford to pay regularly the prohibitive transportation costs. As a result of the telecommuting program for persons with disabilities, other employees have started to ask for a telecommuting option.

3.2 HELPING HANDS BOSTON, MA

This not-for-profit organization is in the second year of a telecommuting pilot for persons with disabilities, funded through 1997 by the Rehabilitation Services Administration of the U.S. Department of Education. To date, 25 individuals have been "placed" in home-based telecommuting positions. The majority have been with medical appointment-reminder services. Companies can hire a person either as a contract employee or as a member of their staff.

Most of the persons with disabilities are not professionally trained, and many can only work part-time, either due to the nature of their disabilities or because of their benefit status. All of the placements so far are in part-time positions. Individuals have a variety of disabilities, but none has a cognitive impairment. The majority of referrals come from state rehabilitation counselors, who also assist individuals with any equipment modifications they may need to become employed. Training is provided when necessary, and the organization will support individuals on the job up to 12 months. Few individuals need any assistance after one month.

Staff members of the organization work primarily on developing job opportunities. If additional funding can be secured, staff hope to train state rehabilitation counselors to find telecommuting jobs for persons with disabilities.

3.3 LIFT INC. MOUNTAINSIDE, NEW JERSEY

Lift is a non-profit organization which identifies, trains, and hires severely disabled men and women as computer programmers and computer specialists. The organization works with specific corporate clients, and employers pay a fee to Lift once they agree to hire an individual. Then Lift usually provides a six-month training curriculum tailored to meet the specific needs of the employer, most of which are large corporations located in New York, Connecticut, and New Jersey. Once training is completed, individuals are hired by Lift as entry level programmers or CAD/CAM specialists. Individuals are paid a competitive wage, and LIFT provides group benefits. Employers reimburse Lift, usually through a contract for at least a one-year period.

There are no exact figures about the number of telecommuters among the 100+ placements. Some individuals work in a traditional office setting every day. When that is impractical, employees work from their homes. All employees are required to be on site at least once a week to receive assignments, review work with their supervisors, attend staff meetings, and communicate with colleagues. Any items necessary to set up a home-based worksite will be provided by Lift. Tutoring by Lift staff is provided at regular intervals, if needed. At the end of the contract year, companies are encouraged to hire the employees directly and to commit to additional trainees. According to Lift staff, over 90% of their placements are still working.

3.4 MIDWEST INSTITUTE FOR TELECOMMUTING EDUCATION MINNEAPOLIS, MINNESOTA

This Institute (MITE) is a program of the Minneapolis Rehabilitation Center, a division of Resource, Inc., a private non-profit human service organization providing services in Minnesota for the last 32 years. MITE is the creation of more than 50 business and government leaders who believe telecommuting will continue to expand. MITE was established to provide comprehensive education and support to telecommuting projects, primarily through training and sales of a telecommuting implementation manual. Revenues from those two activities will be funneled back into the rehabilitation programs which assist persons with disabilities to obtain telecommuting employment.

MITE evolved from a "Flexwork" program begun in 1989 for persons with disabilities. Flexwork candidates are unable to maintain a standard eight-hour shift in a traditional work setting.

Many have disabilities/chronic medical conditions which involve a "fatigue factor". Individuals have had such disabilities as multiple sclerosis, lupus, HIV/AIDS, cancer, arthritis, stroke, heart and respiratory disease, chronic back injury, traumatic brain injury, and chronic pain. Flexwork includes full-time telecommuting, part-time telecommuting, and flexible work hours. Of the 125 persons placed during the past three years, about 25 percent work at home full-time and an equal proportion shift between home and office. Candidates selected for the Flexwork program are provided 16 weeks of computer training. Once they graduate, students complete a four-month internship with a company. According to staff, 90 percent of the interns are hired permanently after their internship.

The program has substantial involvement from local businesses, and their involvement is considered a key to the program's success. Most companies begin by committing to work with one or two Center graduates. Staff from companies serving on the program's Business Advisory Council are also involved in the selection of individuals to participate in the training. Flexwork is not open to individuals with certain disabilities, such as individuals with significant cognitive impairments. All participants must score at least 60% on a computer skills exam and must be able to type 25-30 words per minute.

It should be noted that employers generally are not charged for services provided by Flexwork staff, because the program is funded by a consortium of public agencies and private foundations. Sometimes companies pay for accommodations, yet most training and accommodation costs are reimbursed by the state rehabilitation agency or by private insurance companies. The Flexwork program now operates computer training and job placement sites in Duluth, Saint Cloud, and Minneapolis.

Staff have developed several marketing tools to convince employers that Flexwork can work to their advantage. These include a brochure geared to businesses, a flyer accompanied by manager testimonials, and a videotape which shows strategies on supervision, performance evaluation and quality control for both on-site and off-site work. Companies which employ telecommuters with disabilities include: Blue Cross Blue Shield, Cargill, Dataserv, Ecolab, Minnesota Department of Transportation, Minnesota Pollution Control Agency, Northland Insurance, NWNL, Saint Paul Companies, Toro, University of Minnesota Extension Service, and US West.

Recently Flexwork was awarded a contract to provide phone service and referrals on topics such as emergency shelters, legal help, and counseling. Seven Flexwork participants are serving as dispatchers, working out of their homes. Their disabilities include agoraphobia, cerebral palsy, chemical sensitivity, respiratory problems, and a degenerative hip. One flexwork employee

staffs the phones on weekdays from 4:30 p.m. to 12:30 a.m. and then switches the phone service over to another participant who takes calls during the night. Service is provided around the clock on weekends and holidays. The participants' homes have been equipped with special phone lines for three-way conference calls when a counselor is needed in crisis situations.

Flexwork staff telecommute as do three other employees of the Rehabilitation Center, two of whom have disabilities.

3.5 PHOENIX TRANSIT SYSTEM PHOENIX, ARIZONA

Since late 1987 the Phoenix Transit System (PTS) has been experimenting with the "OPX operator," an off-premises operator who generally works out of her/his house the majority of time. These individuals provide route and schedule information over the phone to transit customers. The experiment began when a PTS employee was partially paralyzed from the mid-chest down in an automobile accident. Although she regained some movement, she suffered problems from sitting up in her wheelchair. With financial support from the Arizona Department of Vocational Rehabilitation, an off-premises extension was set up in her house.

Since then, telecommuting has been offered to all route/schedule employees, with preference given to people with disabilities or chronic illnesses. Currently, 11 employees telecommute and one is disabled (chronic asthma), but many other employees with disabilities have telecommuted in the past. Some have moved into other jobs, while some have become permanently disabled. All OPX operators are required to spend one day a week in the office, health permitting. The operator is included in all office birthday parties, special meetings, and other events to prevent isolation from other employees. Once a week the supervisor visits OPX operators at their houses.

Transit staff consider telecommuting an employee recruitment and retention tool as the flexibility it provides supplements an otherwise modest compensation level. Telecommuting has produced other benefits as well. Telecommuting employees "open" and "close" service daily so that other employees are in the office only during normal working hours, which reduces building security costs and increases feelings of safety among employees. Telecommuting employees have been used as a back-up staff when a regular employee does not arrive on schedule. They have been used also during peak workload periods. Performance of the OPX operators is monitored with the same equipment used for on-site operators.

PTS recently won an award from the mayor's office for hiring people with disabilities. According to a transit official, they are the only transit system in the country which is offering telecommuting.

3.6 TENNESSEE VALLEY AUTHORITY KNOXVILLE, TENNESSEE

This home-based employment (HBE) program provides opportunities for people with severe physical impairments to obtain positions noncompetitively. Five positions have been designated and two individuals are currently working. Two others are completing orientation. Upwards of 53 positions have been proposed for the future. Because TVA's workers' compensation outlays are \$60 million annually, some positions are being reserved for situations involving reemployment.

An elaborate HBE support structure has been created. Each home-based placement is being implemented through the combined efforts of two teams: organizational and corporate. An organizational team will exist at every TVA location which has home-based employees. It consists of a human resource officer, an information services staff, a facilities service person, the employee's supervisor, the employee's counselor or placement specialist (from either the state rehabilitation agency, TVA's office of health services, or the Office of Veteran's Affairs), a technological consultant, and the home-based employee. The corporate team serves as consultants to the organizational team. It consists of a disability services staff member, legal counsel, a labor relations representative, a finance and administration official, and five other members from various TVA divisions.

All home-based employees are being hired through one-year personal services contracts. Adaptive aids and home modifications will be made when necessary. Employees begin with a one-month training period in an office setting. Due to arrangements between TVA management officials and the unions, home-based employees are not charged against organizational staffing limits, nor will their jobs be advertised when they move from a personal services contract into a pre-permanent employment status. Whenever possible, home-based employees are expected to participate in all training sessions and staff meetings. All home-based employees will be given an option of transferring their home-based office to an office setting after two years.

3.7 U.S. OFFICE OF PERSONNEL MANAGEMENT WASHINGTON, D.C.

Flexiplace has been a nationwide project which allows federal employees to work at home or at geographically convenient satellite offices for part of a workweek. Implemented in January 1990, the project consists of three components:

- Work-at-home program;
- Satellite work center program; and
- Flexiplace accommodations for disabled workers.

An evaluation of the work-at-home component was based on data collected from approximately 700 federal employees from 13 different agencies. Of the participants, 7 percent had a physical disability. This proportion is nearly identical to the proportion of federal employees who report having a disability: 8 percent. Based on inquiries during the pilot project period, federal evaluators believe flexiplace could prove successful in recruiting new federal workers with disabilities.

3.8 WISCONSIN DEPARTMENT OF TRANSPORTATION MADISON, WISCONSIN

For the past six years, the Division of Motor Vehicles within the State Department of Transportation has had a home-based project for persons with severe disabilities. These are computer processing oriented positions. Only individuals who are deemed unable to work in an office setting, with the decision made by staff of the state vocational rehabilitation agency, are eligible to participate. Because of the state's extensive civil service provisions, a number of accommodations were made, including a longer probationary period (all training needed to be provided in homes) and special examination locations for the state tests. Fewer than 10 individuals are involved. Couriers are used to take and pick up work from several participants while others are able to attend staff meetings and office social events. By and large, staff have been satisfied with employee performances, and the project was not changed when a new administrator was appointed.

CHAPTER 4 ADDITIONAL PROJECTS

4.1 AETNA INSURANCE HARTFORD, CONNECTICUT

While telecommuting has been an official workforce arrangement since 1988, it has been an informal option, at a supervisor's discretion, for at least 15 years. Staff in the Work/Family Strategies unit of Aetna's Human Resource department are in the process of revising their guide for supervisors to include statements about telecommuting as an accommodation under ADA. Staff would definitely consider hiring a person with a disability as a telecommuter if he/she needed to telecommute as an accommodation. They see telecommuting as a potential option to assist employees on workers' compensation return to work. Approximately 5% of their 40,000 employees indicated on 1992 survey that they telecommute regularly. They do not currently track if telecommuters have disabilities, but staff personally know of one man with a disability who has been successfully telecommuting full-time for three years.

4.2 AMERICAN TELEPHONE AND TELEGRAPH MULTIPLE LOCATIONS

A telecommuting policy adopted in December 1992 allow managers and non-management personnel, with supervisor approval, to telecommute. They do not track disability currently but may do so in the future as telecommuting becomes more widespread. AT&T's Disability Management Team for Health Affairs oversees employment and benefit issues for employees who are absent from work 8 or more days due to injury, illness, or disability. Staff of this team encourage supervisors and employees to consider telecommuting as a way return to work more quickly and comfortably. Staff, in addition, have been encouraging supervisors to allow employees to telecommute before their conditions get to the point where they are missing work. However, all telecommuting arrangements at AT&T are worked out between individual supervisors and employees.

4.3 ARIZONA TELECOMMUTING ADVISORY COUNCIL PHOENIX, ARIZONA

They promote telecommuting as a potential accommodation for people with disabilities.

4.4 UNIVERSITY OF CALIFORNIA-DAVIS DAVIS, CALIFORNIA

Twelve new telecenters are being created as part of a major, multi-year pilot project. Marketing will be performed under contract by a marketing firm. A "secondary" component of the marketing plan will be geared towards the employment of persons with disabilities.

4.5 CALIFORNIA DEPARTMENT OF REHABILITATION SACRAMENTO, CALIFORNIA

A pilot telecommuting program began in January 1994, and applications are being accepted from all appropriate Department staff, many of whom have disabilities. The project is limited to 75 staff employees in the 1,800 person agency, and these individuals will be selected from 130 offices statewide. The project was developed primarily in response to trip reduction guidelines. Although persons with a disabilities are not specifically targeted, a number of employees with disabilities have already expressed interest. Employees must apply for a slot, with the primary selection criteria being that the employee's functions have telecommuting aspects, the employee has the complete trust of her or his supervisor, and that the employee is not on probationary status. The Department will pay for software, if necessary, but will not purchase new hardware if an employee has been furnished with hardware in the office. In terms of equipment for persons with disabilities, there will be an emphasis on portability, such as palmtops with speech output which can be used via a modem, and transferability, such as speech recognition programs which do not require reconfiguration of operating systems. Telecommuting for all employees in the pilot will be limited to a maximum of 16 hours per week.

4.6 FEDERAL COOPERATIVE ADMINISTRATIVE SUPPORT UNITS WASHINGTON, D.C.

Two workcenters in the metropolitan area were slated to open in September under a \$5 million contract from the U.S. General Services Administration. The sites, in Hagerstown, Maryland and Winchester, Virginia are cooperative efforts with community colleges, local governments, and private businesses. Guidelines will include a substantial section on accommodations for persons with disabilities, and the workcenters will be marketed to agencies as a vehicle for employing persons with disabilities, addressing health needs of current employees, and reemploying workers currently receiving workers' compensation. A final report is due in December 1995.

4.7 STATE OF HAWAII HONOLULU, HAWAII

The Hawaii Telework Center assisted a woman, who had a back injury as the result of a car accident, to obtain a telecommuting position at the Workers Compensation Division of the State Department of Personnel Services. They would be glad to assist more persons with disabilities to obtain telecommuting positions, but that has been the only request to date.

**4.8 HEWLETT-PACKARD
PALO ALTO, CALIFORNIA**

A number of Hewlett-Packard branch offices have conducted telecommuting pilots, including participation in the State of Washington's Puget Sound Demonstration Project. One of HP's telecommuters in Washington has a spinal cord injury with medical complications which requires treatment every four hours. This treatment is easier to administer at home than in an office environment. This individual, involved in CAD/desktop publishing, telecommutes several days and works part-time. New official company-wide policy on telecommuting will mention its potential as a possible employment accommodation. HP does not keep official statistics on persons with disabilities.

**4.9 INLAND EMPIRE ECONOMIC COUNCIL
ONTARIO, APPLE VALLEY, RIVERSIDE, AND HIGHLAND, CALIFORNIA**

None of the four centers has had a person with a disability even though this was marketed as a benefit to prospective employers.

**4.10 JOB ACCOMMODATION NETWORK
MORGANTOWN, WEST VIRGINIA**

This group is funded by the President's Committee on Employment of People with Disabilities to educate and advise persons with disabilities, employers, and rehabilitation counselors about workplace accommodations. Discussions and some planning have occurred on a pilot project for matching persons with disabilities in rural areas to employers via telecommuting.

**4.11 COUNTY OF LOS ANGELES
LOS ANGELES, CALIFORNIA**

The program recently was chosen as one of the nation's ten most innovative state and local government initiatives by the Ford Foundation. Roughly 4 percent of the county's staffing complement of 77,000 full-time employees are participating. While recently published information about the project states the program has been effective in accommodating employees with disabilities and those employees who otherwise would be drawing workers' compensation, no information could be obtained regarding persons with disabilities.

**4.12 STATE OF MICHIGAN
LANSING, MICHIGAN**

The Department of Civil Service allows each department to determine its own telecommuting, flexwork options. A significant number of employees at the Departments of Treasury and the Conservation Offices work out of their homes, but no statistics are available

regarding those with disabilities. One individual in the Department of Civil Service, who was on extended disability, worked out of his home part-time as an accommodation.

4.13 SAN DIEGO COUNTY SAN DIEGO, CALIFORNIA

This county government has operated a telecommuting program since 1990 in response to regional air quality problems. Currently, 400 of 17,000 county employees telecommute. Some telecommute from homes, others use satellite offices. The County's Human Resources Department markets telecommuting to supervisors as a potential accommodation for employees with disabilities, but they have not tracked the number of telecommuters who have disabilities. Staff of the department are aware of several telecommuters with disabilities: one with post-polio, one who is paraplegic, and one who has asthma. Once the County adopts a firm ADA policy, which will include definitions of disabilities, staff will be developing new surveys which will include questions on disability. That policy should be in place before the end of 1993.

4.14 SEARS CHICAGO, ILLINOIS

They began a telecommuting pilot in 1990 because of concern with employee retention rates. The project consisted of approximately 15-20 employees in the Information Systems Department of the Chicago corporate office. One of the employees has a severe disability and telecommutes full-time. Although the pilot has been very successful and they have developed an official telecommuting policy, they have not expanded the program beyond the original group because of lower employee turnover and downsizing throughout the company. Sears, as a general rule, prefers their employees with disabilities work in an office setting, because they do not want to isolate or segregate them.

4.15 SOUTHWESTERN BELL HOUSTON, TEXAS

They are working with seven companies in Houston on a 6-month telecommuting pilot. Staff have been marketing telecommuting as an option for employees with disabilities, but to date, corporate staff are more concerned about air quality ordinances. One company offered telecommuting to an employee with a disability but the employee was uninterested.

4.16 U.S. DEPARTMENT OF DEFENSE MULTIPLE LOCATIONS

This pilot project is devoted exclusively to persons with disabilities, with an emphasis on reemployment of individuals receiving workers' compensation. Monthly meetings are being held

with human resource professionals of the services. Personnel cutbacks in DOD have delayed the project and reduced its scope to fewer than 100 positions around the country.

**4.17 US DEPARTMENT OF LABOR, OFFICE OF WORKERS' COMPENSATION PROGRAMS
WASHINGTON, D.C.**

Since 1991, this DOL office has had a formal policy which allows telecommuting or other flexiplace options for employees receiving workers' compensation or who have other non-work related illnesses. However, no one has taken advantage of this option because the union (AFGE) wants a broader flexiplace policy which covers all employees, not just those with disabilities. That policy is anticipated to be implemented in early 1994.

**4.18 WORKABLE SOLUTIONS, INC.
BALTIMORE, MARYLAND**

This private, non-profit organization, previously known as Maryland Corporate Partnership, offers about 300 corporations a single point of entry for information about hiring persons with disabilities. They operate a Job Bank Bulletin Board, where, for a one-time fee, rehabilitation job counselors can access information about position openings. About 135 agencies subscribe currently. Typically, the Job Bank Bulletin Board will list between 35-75 openings each month, most being in service occupations. Staff have no detailed statistics about the proportion of telecommuters among their 800 placements during the past four years. They did recall individuals who became telecommuters for a local hospital. These individuals complete pre-surgery patient paperwork so that when patients arrive at the hospital, fully 95 percent of the information has been completed.

CHAPTER 5 FINDINGS AND SPECULATIONS

The principal findings from this exploratory research are:

- Telecommuting involving persons with disabilities has been more extensive than anticipated;
- Data and information are scarce, primarily anecdotal, and unsystematically collected;
- Projects have been initiated for a variety of reasons, although the recent impetus has been as much due to workers' compensation costs and reemployment as it has to passage of the Americans with Disabilities Act;
- Until very recently, telecommuting involving persons with disabilities has occurred primarily because of efforts by specialized, private, non-profit organizations to train and place individuals; and
- Telecommuting for persons with disabilities appears to be on the verge of a major expansion because of the proliferation of telecommuting projects and because telecommuting as an accommodation has been recognized by more public and private organizational staff.

In most respects, information obtained from the current projects suggests that persons with disabilities are indistinguishable from other telecommuters. ² If this conclusion is accurate, successful telecommuting arrangements for persons with disabilities will demand similar, if not identical, organizational and personal conditions required for successful projects involving able-bodied individuals. As the Puget Sound evaluation found, a successful telecommuting arrangement usually requires a self-motivated employee, a supportive manager and organization, tasks which are amenable to be performed in an office setting at home, computer familiarity, and a supportive family. ³ It is difficult to imagine successful telecommuting for persons with disabilities which did not include these conditions also.

Yet, there may be unique aspects of telecommuting for persons with disabilities which may arise in structuring a project or work arrangement. First, some individuals with disabilities will need not only more specialized adaptive aids, but also will need modifications to work areas within their residences. Private and public organizations must be ready to support financially these modifications. Second, employers should be willing to consider changing their normal selection method for identifying telecommuters. Traditionally, nearly all telecommuters have been current employees and proven performers, rather than new recruits. Employers should recognize that telecommuting for persons with disabilities should allow for new employees as well as current ones. Pre-screening of potential employees, as is performed by MITE, Lift, and Helping Hands, is one method of identifying employees who will be less risky for employers. Unless, new

employees with disabilities can be accommodated through telecommuting, its impact will be limited principally to reemployment cases.

A third potential, major difference is philosophical resistance to telecommuting from disability advocacy groups. Segregation of persons with disabilities within society and its institutions has been so widespread that any employment arrangement, other than complete mainstreaming, is suspect. Various safeguards have been identified in projects: (1) procedures which require participation in all staff meetings, training sessions, career development programs, and social functions etc.; (2) requirements that all telecommuters begin their employment by spending the first month or two in orientation within the traditional office setting and that they work in the office at some pre-determined interval; and (3) a mandatory offer for an office location after a period of home-based employment.

It is unknown if such safeguards have proven adequate for minimizing the isolation of telecommuting employees with disabilities from his/her office colleagues. There have been no data collected from telecommuters with disabilities regarding their satisfaction on group integration. These safeguards need to be evaluated along with other possible safeguards such as greater use of satellite offices and restrictions on full-time, home-based telecommuting for persons with disabilities to only those individuals who otherwise would be unemployed. Ensuring that telecommuting does not segregate employees with disabilities from other employees is perhaps the key issue which needs to be resolved before telecommuting can reach its full potential. Recommendations should be developed, through cooperation among disability and employer groups, which will influence the design and implementation of future telecommuting projects in this country involving persons with disabilities.

CHAPTER 6 NEXT STEPS

While it is easy to project that telecommuting will become a dominant work arrangement in coming years, there are clearly potential impediments. Continued organizational downsizing and budget cutbacks which preclude upfront investments will stifle new ventures such as telecommuting. Resistance from mid-level managers and senior managers' fear that every employee will want to telecommute still must be countered. A shortage of outcome-based managers and organizational outcome measures, especially in public organizations, must be overcome. And although most data has been positive to date, if future data on productivity and quality outputs of telecommuters becomes less positive, telecommuting could be restricted primarily to projects designed to reduce air pollution.

As a result of the current research, it is apparent that telecommuting offers employment opportunities for persons with disabilities. Yet, there is much still unknown about telecommuting and whether it will become a major opportunity for organizational improvements and employment accommodation, or merely another workplace option utilized by a handful of employees. Both new research and new projects need to be started soon to determine further how well telecommuting will answer the needs of disabled workers and employers alike.

APPENDICES

NOTES

1. The Americans with Disabilities Act (ADA), passed in 1990, prohibits employment discrimination by private employers against qualified individuals with a disability. Most state and local governments have been outlawed from practicing discrimination against individuals with disabilities under section 504 of the 1973 Rehabilitation Act. Employers are required to make reasonable accommodations in work place policies and workplace environments such as lighting, equipment, and physical access to facilities.
2. To our knowledge, there have been no comparisons of job satisfaction, group integration, and productivity between telecommuters with disabilities and able-bodied telecommuters.
3. This is reported on page 26 of the State of Washington's Puget Sound Demonstration evaluation report.

EXCERPTS FROM STATEMENTS AND POLICIES

"The Interagency Committee on Handicapped Employees (ICHE) recommends that Federal agencies consider home-based employment as a selective placement option for individuals who, because of the nature of their disabilities and/or required medical treatment or therapy, are unable to participate in a standard work setting during a normal work schedule. This would include employees whose disabilities make it extremely difficult for them to commute to and from a workplace or to work in the normal environment. . . .

The ICHE believes thatwhenever possible, individuals with disabilities should work in the ordinary work environment. Home-based employment is not meant to isolate or segregate people with disabilities, but rather to offer options to people with disabilities who might not otherwise be able to be part of the labor force."

Source: Interagency Committee on Handicapped Employees, *Home-Based Employment*. Washington, D.C., May 1988.

"The rationale for the telecommuting work option rests with benefits being greater than the costs to plan and operate a program. The three benefit categories are societal, management, and personal.Societal benefits include the following:

- Employment opportunities for the disabled and mobility restricted are improved with the telecommuting option.

Management benefits ...include the following:

- Trained employees with health problems can be accommodated to reduce their burden of getting to work, while they are still able and want to work.

Telecommuting may be an option for people who find it difficult to commute to work, wish to continue working through a convalescence period, or are considered unemployable because they cannot leave their home, but are able to perform work independent of location.

Telecommuting schedules should be established to balance management needs for face-to-face meetings with reasonable accommodation for the employee's disability."

Source: State of California, *Telecommuting Work Option: Information Guidelines and Model Policy*. Sacramento, CA: Telecommuting Advisory Group, June 1992.

"Last, but far from least is the set of benefits telecommuting offers to those individuals who are unable to participate in the workforce because they cannot leave home. This group includes the physically handicapped and some parents with small children.

There are several types of benefits here. The physically disabled can achieve, or resume, careers that would be unapproachable without telecommuting. They can not only become contributing members of the workforces, but some can be eliminated from the public support rolls. The benefits are both psychological and financial."

Source: JALA Associates, Inc., *Telecommuting: A Pilot Project Plan Sacramento, CA*: California Department of General Services, June 1985.

"Handicapped employees are a valuable source of talented and dedicated workers. Current employment efforts which focus on accommodating handicapped employees in the regular office environment will continue. Such efforts can be supplemented, however, by flexiplace work arrangements to help agencies further tap the reservoir of unemployed handicapped persons.

Some severely disabled individuals cannot commute to work or work for long periods without rest. Special computer technology and telecommunications can enable them to be valuable home workers.

Speech recognition systems, infrared controllers, or simple mouthsticks allow those with mobility impairments to control computers.

Optical character readers, speech synthesis software, and tactile picture devices can provide valuable assistance to blind employees.

Video teleconferencing lets deaf employees communicate by sign language."

Source: U.S. Office of Management and Budget, *Guidelines for Pilot Flexible Workplace Arrangements*. Washington, D.C.: President's Council on Management Improvement, January 1990.

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END NOTE

"Telecommuting, like most innovations, enters roughly three phases. The first is the startup phase, in which the first tests of the idea occur; then the word spreads; major skeptics are answered; and the biggest bugs in the process are squashed. Then the innovation amounts to a fundamental change in the way we do things, this phase can take as many as 30 years. With telecommuting, phase one is just about over. The Puget Sound demonstration is a major step in showing the world the practicality of telecommuting and its impacts on traffic congestion, energy use, and air quality.

Next comes the general acceptance phase. At this point, the more conservative people and organizations decide that the idea is not so crazy after all; it may even be superior to what we've been doing for the last hundred years or so. Phase two will last from about 1994 to 2020, according to my forecasts. By then, telecommuting will not be news to anyone. It will be business as usual for most organizations.

Finally, there's the mature phase. Most people who were ever going to telecommute are doing it. Growth has stopped, in relative terms, although absolute growth will occur because of population increases. This final phase will begin around 2020."

Jack Niles

¹The Americans with Disabilities Act (ADA), passed in 1990, prohibits employment discrimination by private employers against qualified individuals with a disability. Most state and local governments have been outlawed from practicing discrimination against individuals with disabilities under section 504 of the 1973 Rehabilitation Act. Employers are required to make reasonable accommodations in work place policies and workplace environments such as lighting, equipment, and physical access to facilities.