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Financing Adaptive Technology

**A Guide to Sources and Strategies
for Blind and Visually Impaired Users**

By Steven B. Mendelsohn

Financing Adaptive Technology: **A Guide to Sources and Strategies** **for Blind and Visually Impaired Users**

By Steven B. Mendelsohn

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Chapter I

Introduction

For blind and visually impaired people, the 1980's are an exciting time to be alive. Computers and related technologies have yielded opportunities for personal independence, information access and employment undreamed-of only a few years ago.

Adaptive sensory aids have already contributed to the enrichment of many lives, but the promise of technology remains illusory for far too many people. No consensus exists as to what the service system and consumer communities should do to ensure that suitable equipment becomes available to all those blind and visually impaired persons who want or can benefit from it. But one thing upon which most people would agree is that among the barriers, cost is the most intractable and pervasive.

There was a time within recent memory when the unavailability of technical information was itself an all but insurmountable hurdle. Sometimes it seemed as though computer access were only a rumor or a myth. Much remains to be done in the areas of comparative product information, hands-on exposure, training and user support. But with the establish-

ment of organizations dedicated to the dissemination and support of the new technology, (1) the appearance of special-interest periodicals designed to provide up-to-date product information and user feedback, (2) and the publication of resource guides devoted to in-depth reviews of the relevant hardware and software, (3) lack of basic information has ceased to represent so great a barrier as once it did. Still, the problem of equipment financing, dramatized in the frustration and pessimism of many would-be users, remains at least as acute as it has ever been.

Now that lack of reliable information or of successful role models no longer constitute so great a barrier, a comprehensive appraisal of available third-party funding sources and self-funding strategies seems especially timely. By systematically and pragmatically describing the available funding sources, this guide should contribute to further progress in the sensory aids field. It is offered to complement the work of growing numbers of equipment users and resource organizations throughout the country. Its existence is tribute to the outstanding work they have already done.

What then are the dimensions of the financing problem? Function for function, computer technology for blind and visually impaired users costs more than its standard equivalents. If a mainstream computer is to be made accessible to visually handicapped users, additional components — large-print software or an enlarging monitor, braille or synthetic speech screen output, or hard-copy braille embosser — are to varying degrees necessary. As a result, the cost of extending computer access to totally blind or partially sighted persons can exceed by anywhere from \$150 to \$35,000 those that must be incurred by the sighted user.

At the same time, the financial resources of blind people tend to be limited. As suggested by high rates of labor force nonparticipation among people of working age, by widespread transfer payment dependency, and by the greater prevalence of serious visual impairments in the later years (when income,

apart from blindness, tends to be reduced), blind consumers, on average, simply do not meet the stereotypic notions of wealth in our society. And blind people come to this moment of technological promise in a fiscal environment less than conducive to an expansive governmental response to the 'aspirations technology has kindled.

To acknowledge these interrelated circumstances is not to be pessimistic, however. Just as creativity and imagination have been forthcoming in abundance among the developers and users of the new technology, so are they required and rewarded in the realms of dissemination and financing. As the experiences of many users and the contents of this guide demonstrate, more funding sources and strategies do exist than are commonly discussed in the service-provider or consumer communities. With knowledge of the issues and opportunities posed by each, with a sense of the population subgroups and situations each is best suited to meet, financing can come to represent just another example of the engineering problems that have progressively yielded to solution over these past few years.

Incorporation of a funding strategy into one's thinking adds a new dimension to the already complex business of equipment selection. This is so because both the choice of components and the timing of their acquisition may be heavily influenced by the fact that different things can be obtained in different ways. But this extra effort is well worth undertaking, representing as it does only a small additional burden, and being fully within the capacity of anyone of ordinary patience and determination. Not everyone who wants a computer will find an answer here. But among these options and the additional ideas they can stimulate, there should be found more meaningful access and greater opportunity for many people.

A preliminary sense of what the major options are can be derived from the Table of Contents. Each of these sources has been used successfully. Like some of you, I wish that they could simply be listed, with a phone number provided for each.

In the complex bureaucratic environment that surrounds our lives, it is never that simple.

Accordingly, the guide endeavors to explain the relevance and operation of each of these sources, to analyze the issues and problems that will arise in using them, to suggest the relationships among them, and to alert the equipment seeker to all the complexities that can reasonably be foreseen. As such, the guide aims at formulation of acquisition strategies, and at assisting readers to think about each potential funding source with knowledge and perspective.

Some may grow impatient with the amount of detail that is required to do this, but extensive background information on each source is indispensable for two reasons: first, adaptive equipment is not a central concern of any of these service systems. To talk about their equipment policy in isolation from some sense of their overall operation would have little meaning. Second, success in utilizing one or more of these sources depends in large part on timing, on the order in which they are approached, and on the equipment seeker's ability to anticipate and prepare to meet their characteristic responses. Drawn from experience, the material in this guide is designed to enable the would-be technology user to achieve these goals.

Let us offer a preview of these complexities by asking the seemingly simple question: What is meant by financing? In its simplest terms, this means the ability either to get some agency (a third-party) to provide the equipment, or the ability to buy it yourself. But, as a practical matter, the question really means a great deal more.

When you ask how to pay for an item, you are really asking a host of questions. Are you saying that you need its entire cost in cash? That you need to raise a downpayment but will have sufficient cash flow to handle installment payments thereafter? That your resources are adequate for the downpayment but insufficient for anything more? That you would be able to swing it if credit were available? That you need the equipment within a particular period of time if it is to have any

value to you? That there is some agency that will provide equipment but cannot do so within a timeframe that is relevant to your employment or other needs? That you can be flexible in your component selection, if some other setup can more readily be funded? Or that you really care primarily about access to equipment, irrespective of ownership?

Depending upon your answers to these and other questions, your funding strategy may be very different. In order to answer these questions and to act upon the answers, it is necessary not only to incorporate considerations of funding into your thinking and planning from the very earliest point, but also to remember that bottomline cost and fundability are two very different, sometimes even contradictory, considerations. There are times when a more expensive device is easier to get than a less costly one.

Funding is just another piece of the puzzle, in the end much like selecting the right interface cable or like evaluating the tradeoffs involved in component selection. As the various public and private bureaucracies that are involved unfold in the following chapters, the practical importance of this analogy should become concrete and clear. For the moment, please believe that virtually anyone who can increase their autonomy at home, their standing in school, their credibility as a job seeker or their performance on the job through the use of technology, can also devise a strategy for obtaining it.

Having asked you, the reader, to trust that your further attention to this guide will not be utterly in vain, it occurs to me to wonder whether you may not have a right to know who I am and how I came to undertake this work. In 1980 I was asked by the Vera Institute of Justice in New York City to establish an experimental job placement program (Project Job Site) on behalf of blind and visually impaired persons. It did not take us long to recognize that technology was a key element in the creation of meaningful employment opportunities for our participants. More bureaucrat than engineer, I have, as an attorney,

as a rehabilitation practitioner and as a citizen, been committed to this goal ever since.

If this guide is successful, it will do two things. First, it will delineate resources and describe procedures. Second, and more important, I hope it will serve as a stimulus to your own creative thinking and planning in areas which may before have been unfamiliar or inaccessible to you. To both these ends, the guide includes an extensive reference section, enabling those wishing to follow-up on pertinent legal provisions to do so. No one need trouble over these footnotes in order to understand the text, but for those curious about the law or wishing to go further, these citations may represent an introduction to materials that can be readily obtained and understood by lay readers as well as lawyers. A brief introduction to these materials is contained in note 4 at the back of the book. (4) No knowledge of law or familiarity with computers is needed to understand and use this book.

Finally, although the guide focuses on the service systems and sensory aids which are of particular concern to visually disabled persons, everyone interested in rehabilitation technology should find it rewarding. Wherever possible, parallels to other disability groups are made clear. When differences between the situations confronting blind and other disabled persons emerge, these are noted as well. It is hoped that one important byproduct of the guide will be the demonstration of a replicable method for undertaking similar analyses on behalf of other disabled groups.

To all of you then, but most of all to the individual whose life can be enhanced with technology, I extend my best wishes for success. I look forward to hearing from all of you at the address indicated on the title page. If, after buying and carefully reading this book, you still cannot devise an acquisition strategy, I especially hope that you will get in touch with me so that we may brainstorm together.

Steven Mendelsohn
May 1, 1987

Chapter II

The Vocational Rehabilitation System

An agency for the blind exists in every state of the Union. These agencies differ in name, jurisdiction and position within the state governmental structure. Most commonly they are called state "commissions," so for purposes of simplicity that is the term used here. But they may also be called "divisions," "bureaus," "state services," etc.

Name also bears on jurisdiction. Some commissions are for the "blind," others for the "visually handicapped" or "visually impaired," still others for combinations of the above. These names may reflect changing fashions in terminology, but they can also dictate varying jurisdiction, ranging from legally blind (5) persons to those with visual impairments of lesser severity.

These state agencies also vary in organizational locus. Studies of the rehabilitation process have generally divided them into two groups: those that are independent and those, called combined agencies, that are units of generic rehabilitation agencies. Approximately half the states fall into each of these broad categories. The independent agencies are, in turn, typically housed within cabinet-level entities such as state de-

partments of social services, education, labor or health. Blindness agencies in the second category also vary in the sense that the generic rehabilitation or disability services agencies of which they are a part themselves operate under differing administrative auspices. (6)

As varied as these commissions are in such cosmetic and substantive matters, it is with what they share in common that we are principally concerned. For in most states these blindness agencies serve as the "designated state unit" for implementation of the Federal-State Vocational Rehabilitation (VR) program in connection with persons disabled by blindness. In this role they constitute the largest source of third-party sensory aids funding in this country.

To understand the VR system as a source of technology, a four-tier structure must be examined. We will begin with a description of the superstructure of federal law and regulations, then proceed to the role of state VR agencies in implementing the program, then consider the discretionary decisions which rehab personnel must make that can affect the outcome, and finally explain the powers of other government agencies in determining when equipment can be furnished.

(a) The Federal Framework

The VR system represents the most far-reaching dimension of federal government involvement in the lives of blind and other handicapped citizens. Operating under Title I of the Federal Rehabilitation Act of 1973, as amended, (7) the VR system is structured along the same lines as many other categorical grant programs, including Medicaid. That is, the program is administered by state agencies, under regulations promulgated by one or more federal oversight agencies, and subject to a matching funds requirement for state participation. In the case of direct grants to states for the provision of rehabilitation services to individuals under Title I, this matching fund requirement is 20%.

The primary federal oversight agency for the Rehabilitation Act is the Rehabilitation Services Administration (RSA) of the

United States Department of Education's Office of Special Education and Rehabilitative Services. RSA promulgates the federal regulations which are key to the interpretation and application of the statutory language in Title I. (8)

When a client receives services from a state VR agency, this is almost always under Title I. But direct grants to states for the provision of VR services, including equipment, do not constitute the entirety of the Rehabilitation Act. Perhaps best known among the Act's other features are the anti-discrimination provisions of the famous "Section 504." (9) Any statute can be amended from time to time, and most major federal laws frequently are. In the case of the Rehabilitation Act, there is an additional reason for periodic amendments. Unlike the Social Security Act or the Internal Revenue Code, the Rehabilitation Act is not a permanent law. Pursuant to the Rehabilitation Act Amendments of 1986, signed into law last October, (10) the program has now been reauthorized for an additional five years through the end of Federal Fiscal Year 1991, on September 30, 1991. This is the third reauthorization of the Act since its passage in 1973.

These extensions of the Act have always been an occasion for making important substantive changes, as well. In this connection, the 1986 amendments contain a number of important new provisions dealing with "rehabilitation engineering," "adaptive technology" and related matters. (11)

As of this writing, RSA has not yet issued regulations to interpret and apply these amendments. Therefore, it is not possible to know exactly what impact these new provisions will have. But as we move through our discussion, their likely consequences will be explained. Should regulatory developments warrant, a supplement to this guide will be issued in six months to a year.

Like all categorical grant programs, Title I and RSA's implementing regulations embody a detailed expression of federal intent in terms of what is to be done, and how, by whom and when these goals are to be accomplished. Probably it is fair to

say that the controlling statute and regulations for this and most such programs are compounded in equal measure of instructions about things that must be done, things that may not be done, and things that are optional. To understand this or any other legal framework, you must ask what they require, what they forbid, what they allow as a matter of discretion, and whose discretion they invoke.

Under the VR program, states qualify for receipt of federal funds by filing state plans embodying their commitment to adhere to the federal mandate. State plans, which are ordinarily effective for three years, must include commitments and assurances of compliance with the federal mandate in more than two dozen programmatic, procedural and fiscal areas. (12) Some of these relate directly to equipment, but the vast majority do not.

A good example of one that does is the provision of the 1986 amendments requiring state plans to indicate how the state will make "rehabilitation engineering services" available to increasing numbers of handicapped persons. (13) Those state plan requirements which do not relate specifically to equipment are nevertheless important, because they create the context for the availability of all services, including technology.

Designated State Unit: In their plans states are free to designate a single state agency to provide and supervise the provision of VR services to all disabled persons. They are also free to designate a "separate" agency for the furnishing of such services to "the blind." (14) This option exists with no other disability group. Where two agencies are used, the state may file a consolidated plan covering both, or may file a separate plan for the blindness agency. (15)

Generally speaking, whether a single or separate agency model is used, the federal requirements that deal with technology are uniform. This derives mainly from the fact that blind clients are considered to be "severely handicapped," and are thus to be dealt with under the same rules applicable to all severely disabled persons. (16)

Eligibility: Since they are considered by law as severely disabled, blind applicants will rarely encounter any eligibility problems on this basis. But being disabled does not automatically entitle anyone to VR services, let alone determine which particular services they would be eligible to receive. Where problems can arise is on the issue of capacity to benefit from services, that is, in the "assessment of vocational potential."

The standard which states must use in determining eligibility for services is capacity to benefit "in terms of employability." (17) This standard is in turn a function of whether the individual is deemed capable of achieving one of the "successful outcomes" defined under the law, and whether VR services are needed for its achievement. These outcome categories will be discussed below.

Therefore, if a state finds a blind person ineligible for services, lack of capacity to benefit is likely to be the reason. Such lack of capacity can be predicated on any number of grounds. In the case of some multiply handicapped blind applicants, it has been based on a finding that their disability was too severe. Altogether, there are eight or nine reasons for finding disabled persons ineligible for VR services, ranging from excessive severity to things like refusal to cooperate or inability to locate. Once an individual has been determined to be eligible, states still have the right to determine the nature and scope of VR services to be provided, as we shall learn in Section (b) of this chapter.

Evaluation: (DVE, for diagnostic and vocational evaluation, as it is commonly called) or extended evaluation represent the primary means by which states make these eligibility determinations. State plans must certify that no charge will be made for evaluation. (18)

The relevance of technology to vocational eligibility is that its consideration and use in the evaluation process may give rise to possibilities that would not otherwise be apparent. Up to now there has been nothing in the federal regulations requir-

ing states to promise to incorporate computers into their evaluation processes.

The 1986 amendments substantially change this by clearly mandating the use of rehabilitation engineering and other technologies in the evaluation and assessment phases of VR. (19) Use of computers in the evaluation process can often reveal skills and abilities that have important vocational potential. As such, the incorporation of computer-dependent outcome goals and of computer use potential in DVE modules can make the difference in availability of VR services to persons who might otherwise be found ineligible for them.

It is important for clients, state agency counselors and private agency evaluators to be alert to these possibilities. Applicants for service have a right to expect this measure of thoroughness and professionalism in their evaluation, whether or not they have any prior knowledge about technology. If a client has a vocational goal that seems reasonable in terms of background and skills, and if networking inquiries reveal that technology exists for facilitating the performance of such work, it is reasonable to expect that evaluation would encompass the necessary assessment.

On the other hand, decisions about vocational potential may involve considerations on which technology has little bearing. In such cases, incorporation of technology into the evaluation modality may make little practical difference. In any event, during the period of transition required for implementing regulations and state plan provisions to take shape, clients and counselors should remain particularly alert to this question of what the vocational evaluation includes.

Individualization: Once eligibility for services has been established, the content and objectives of those services remain to be determined. Commonly thought of in terms of such concepts as the setting of vocational goals or the selection of service-providers and rehabilitation programs, this process has important implications for the use and the acquisition of equipment down the line.

Federal regulations require that each state's plan make provision for the use of the Individualized Written Rehabilitation Program (IWRP). (20) The IWRP, like its better-known Individualized Education Plan (IEP) counterpart in special education, has formal and substantive elements.

At its simplest level, the IWRP is merely a form in a case file. But if it is used by the client and counselor to jointly plan the rehabilitation process, to set goals and to allocate responsibility for their achievement, it can be an extremely useful tool for insinuating technology into the rehabilitation process at a point sufficiently early for its full potential to be explored and for its timely acquisition to be assured.

The 1986 amendments strengthen the IWRP process in a number of ways. These changes seem to greatly enhance its potential for effective use as a tool for integrating technology assessment and planning into the rehabilitation process. Among other requirements, the IWRP must contain: statements of long-range rehabilitation goals and intermediate objectives; and a statement of the specific VR services to be provided, with their dates of initiation and anticipated duration and with a schedule and criteria for determining whether their goals are being met. Procedurally, the IWRP must be reviewed at least annually, or as needed, with the client being given the opportunity both to participate in its formulation and agree to its terms.

Perhaps most important, "where appropriate" the IWRP must include a statement of the "specific rehabilitation engineering services to be provided" in implementation of both the intermediate and long-range rehabilitation goals. (21)

In the day to day VR world, the conscious and shared planning process contemplated by the IWRP frequently does not occur. To many VR clients, the news that their VR programs have been formulated and conducted under an IWRP may come as a surprise. To many counselors the IWRP may be just another form in the case folder, just another piece of paper standing as technically required documentation for the com-

pletion of a process which chronic stress, large caseloads and limited options make impossible in anything but name. If given the prominence and attention it deserves, the IWRP process can facilitate the sort of communication and shared effort that can lead to timely and effective use of equipment, both as a tool in evaluation and training, and as a major component in the eventual achievement of successful rehabilitation outcomes.

Required services: There are approximately fifteen specific services which the states, through their plans, must agree to provide to eligible clients. (22) To say that these services are "required" does not of course mean that any particular client has an absolute right to them. Rather, it means that these services must be made available as part of the overall state program to those clients for whom they are deemed appropriate. In addition to these core VR services, a number of optional services may be made available under the program at state discretion. (23) Basically, it is from among this mix of services that the IWRP is formulated.

Among required services, some (such as the above-mentioned vocational evaluation, as well as counseling and job placement) must be provided without regard to clients' economic resources. (24) Others (including sensory and communication aids) may be conditioned upon some client cost-sharing, depending on economic need. (25)

A situation in which federal regulations would require that equipment be provided to a particular client is difficult to imagine. By the same token, a situation in which they would operate to bar the provision of sensory aids to a client eligible for VR services is equally hard to conceive.

Among the fifteen VR services that states must agree to provide, where appropriate, as many as eight are worthy of serious consideration for their bearing upon equipment. The role of "evaluation" has been discussed above. "Vocational training" (26) can be thought of in much the same light. With these, the issues are the availability of technology in the setting where

the evaluation or training is taking place and the extent of client access to it.

The remaining relevant services in this group would involve the furnishing of items directly to clients. They include: "telecommunications, sensory, and other technological aids and devices"; (27) "tools and equipment" necessary to enter an occupation or a small business; (28) "job placement" in suitable employment; (29) "post-employment services" to maintain suitable employment; (30) and "other goods and services" which can reasonably be expected to benefit a handicapped individual in terms of employment. (31)

Although the scope of each of these services is to some degree federally defined, by far the largest factor in determining their relevance is the policies the state VR agency has adopted for interpreting and providing them. Nevertheless, federal definitions do limit state flexibility in defining the scope of several of these services.

For example, job placement is defined as "placement in suitable employment." Many VR clients have had occasion to argue that one or another advanced device could enhance the level or quality of their employment outcomes, or maximize their capacity to perform job tasks. Their arguments have frequently proved unavailing, because "suitable" employment and "optimal" employment are not the same thing, either in terms of the outcome goals they denote or the level of function they require.

Similarly, while many have criticized the unwillingness of state agencies to use the "post-employment services" category as a means for providing equipment that would enhance the capabilities of persons already employed, or that would foster upward job mobility, federal authorities have been clear in defining this service as available only to "maintain" employment. Accordingly, states are obligated to restrict its use to situations where job loss is imminent, due to the effects of disability.

Several provisions of the 1986 amendments have important implications for these required VR services. For the first time, "rehabilitation engineering" is established as a rehabilitation service in its own right. (32) The statutory language does not make clear whether rehabilitation engineering will be available only to persons receiving services under Title I, or whether broader coverage, including, for example, recipients of independent living services under Title VII, is also intended. Time will tell, but even assuming the narrowest interpretation, the regulations interpreting this exciting new service will be a matter of great interest and importance.

In addition to adding this new service, the amendments also expand the scope of one of the existing services. In specifying the contents of the IWRP, the amendments indicate that an assessment of the expected need for post-employment services, as well as a reassessment prior to case closure, must be included. "Where appropriate," a statement of how these services will be provided must also be forthcoming. (33) The amendments also appear to broaden the range of circumstances under which post-employment services (PES) can be provided. Until now, PES has been available only to "maintain" suitable employment, but the new law indicates that they may now be available, not only to "maintain" but also to "regain" employment. (34)

Pending the issuance of regulations, we can again only speculate on what these changes will mean. Inclusion of PES-planning in the IWRP process encourages counselors and clients to anticipate what these needs may be. This, in turn, should reduce some of the difficulties sometimes associated with the timing of case closure in relation to procurement.

So far as the addition of the word "regain" is concerned, this broadening in the scope of service could eliminate the need for time-consuming and cumbersome case reopening, in the event of job loss. As things now stand, an individual cannot obtain equipment under a job retention rationale unless there is an imminent threat of job loss. This creates a very narrow

window of opportunity. By the time the request for PES is acted upon, the job may be lost. But subsequent efforts to "regain" employment would require the opening of a whole new VR case. This may no longer be true.

With the exception of post-employment services, equipment will rarely be provided as an isolated service. This is largely because of the policy, expressed in various ways throughout the federal scheme, favoring comprehensive services, usually provided by full-service rehabilitation facilities, as the means for achieving vocational goals. This federal policy is important for a number of reasons. First, it raises the question whether equipment will be provided in its own right or whether its consideration will be supportive of a full range of VR services. One state agency may be willing to think of "sensory and communication aids" or "other goods and services" pretty much as independent services or as intermediate rehabilitation goals, in their own right. Another agency may tend to think of equipment only as incidental to an outcome goal such as job placement.

These subtle variations in philosophy, although they are rarely discussed, play a major role in determining what an agency's overall attitude toward advanced technology will be. They are also important because the choices that an agency makes about how equipment will be grafted onto "full-service" rehabilitation go a long way toward determining who will evaluate the clients, who will provide the computer training, and where and when in the rehab process these things will be done.

What we have said of the IWRP also holds true for the specific VR services. A counselor and client can work long and closely together without the range and names of these specific services ever being mentioned. Clients may benefit if they are able to name each of these service categories. In this way they can contribute to the fullest consideration of every option for equipment. Clients are justified in expecting their counselors to indicate how the state defines and applies each of these services. But clients must also remember that the absence of pro-

hibitory language in the federal regulations cannot by itself serve to justify or compel the provision of expensive equipment.

As the foregoing suggests, severe restriction of equipment availability generally has most to do with the way the state has chosen to define the scope and nature of its services. Nevertheless, agency personnel may fear, and clients be told, that federal regulations may bar the provision of equipment in a particular situation. With proper development and documentation of skills, goals and needs, this should rarely be the case. But this does not mean that the fear or the assertions are insincere. If the VR system is to fulfill its potential for enhancing productivity through technology, and if clients and counselors are to overcome the suspicion and misunderstanding that too often inhibit the joint effort necessary for success, some discussion of the sources of these misgivings may be helpful to all the parties involved.

As anyone who has ever worked in an organization well knows, there is a world of difference between saying that something is permissible and saying that the system actively encourages or rewards doing it. For one thing, state agency personnel may have only the most fragmentary exposure to the federal regulations. In such a situation, the risk of being wrong is often understandably more compelling than the rewards of being right. In this light, it is important to remember that federal audits of state agency practices, case folders and expenditures are not always consistent or predictable. In the absence of strong managerial support for technology within the VR agency, reluctance may present the path of least resistance.

The purchase of often expensive items of equipment for particular clients is visible and reviewable in ways that other kinds of expenditures are not. No one would complain if expensive psychotherapy failed to restore health, or if protracted guidance and counseling were to prove unsuccessful in yielding a positive self-image. The same cannot be said of a computer that was supposed to make someone employable, or, worse

yet, that was "guaranteed" to interface with a particular main-frame...but didn't. With an item of technology, provided for a specified and measurable purpose, the potential for recrimination is inherently greater.

Another major source of caution also lies in the philosophy of VR. Under circumstances where resources, even if not depleted, are never adequate to meet all needs, it should not be surprising that some agencies and practitioners hold to the view that basic expenditures on behalf of the largest possible number of clients are preferable to large-scale investment in what are perceived as an elite few.

These obstacles are falling with time. It may not be too visionary to suppose that within ten years the microcomputer with adaptive output will be as routine an accoutrement of rehabilitation as the cassette tape recorder is today. But in the difficult period of transition that lies between this day and that, counselors and clients face unprecedentedly stressful interactions, calling forth the most of sensitivity, intelligence and good faith that each has to give. It is one of the major purposes of this guide to focus their attention on some of the key informational elements necessary for that process to work.

Outcomes: Although the federal program aims at the "vocational" rehabilitation of handicapped individuals, it is important to bear in mind what this really means. It is by now well-understood that "vocational rehabilitation," "in terms of employability," is not limited only to the acquisition of a competitive job. A number of other "successful" outcomes are available. These have for some time included placement in self-employment, placement in a sheltered workshop and case closure in "homemaker" status. (35) With the 1986 amendments, they include "supported employment" as well. (36)

The use of homemaker outcomes to achieve successful case closure among blind clients has been a subject of criticism and controversy in recent years. In many states, this closure status has represented a plurality outcome category among blind rehabilitants. Critics have contended that homemaker

outcomes represented an easy way for state agencies to generate statistics showing high success rates without confronting the real difficulties associated with the competitive employment of blind persons. Defenders of the state agencies have responded that, particularly with the elderly and multiply handicapped blind clients whose needs have become an increasing preoccupation, such closures represent the only viable outcomes that can be pursued. A corollary to this defense is that use of the homemaker goal has permitted stretching of VR dollars to meet the needs of persons who would otherwise be ineligible under the program, but for whom no alternative service system exists. Similar disputes have characterized the use of sheltered workshop outcomes.

In a variety of ways, the federal government has attempted to weigh in on the side of competitive outcomes in recent years. Nevertheless, to the extent that sheltered workshop or homemaker outcomes may continue to represent legitimate IWRP goals in a number of cases, the potential of technology for facilitating these outcomes should not be overlooked. As this relates to equipment, it means that the same group of service categories should be reviewed. Nothing in the federal regulations limits the scope of these services or the availability of equipment under them because the IWRP goal involves an outcome category other than competitive employment.

Where competitive employment is the goal, educational or vocational training placements often represent the pathway to its achievement. To the degree that technology is relevant or essential to the educational or other training process, its provision is entirely permissible under the federal mandate. Again, this does not mean that states are barred from placing limits on their financial support for educational technology, just as they often do on their payments for tuition and fees.

Where VR and special education are cooperating to "transition" a student from school to work, it is vital to work-out which cost items it makes most sense for each to pickup. If the two are not coordinated on this, the student/client may

end up getting some needed services twice and others not at all. The existence of an Individualized Education Plan calling for technology does not impose any obligation on the VR agency, however. On the other hand, if the VR agency has been consulted by the special education system in formulation of the IEP, some real momentum for VR financial participation may be generated. This is most likely to occur in states where the commission is vested with responsibility for the education of blind children alongside its VR functions.

In the same way as educational goals do not preclude equipment, persons placed in sheltered workshops (including work activity centers) also should not assume that equipment is unavailable. In addition to the service categories listed above, there is another provision of the law which may have special relevance here. This provision is mostly honored in the breach, but it does have real potential. Placements in sheltered employment, though subject to case closure after sixty days as "successful" outcomes, are a form of "extended" placement. These cases are subject to annual review for purposes of determining whether return to VR to achieve competitive employment or some other goal is appropriate.

There appears to be little effort on the part of workshop management or state agencies to use these provisions as a means of moving blind workers into the competitive sector. Nevertheless, to the extent that the review may occasionally yield this potential, equipment is properly included among the supports to competitive placement that the state agency may provide. Sheltered workers may here have an advantage over many other clients. Their experience with machinery in the shops may contribute to their effective participation in assessing equipment needs in other settings. This is particularly the case where the competitive work under consideration is similar in nature to the tasks performed in the shop.

The self-employment outcome category has most typically been thought of in terms of the establishment of small business enterprises. Among these, vending facilities operated

under the provisions of the Randolph-Sheppard Vending Facilities Act (37) have been the most widely used type. Arrangements vary among states, but the key point, again, is that where Randolph-Sheppard or other small business enterprises are contemplated pursuant to a self-employment IWRP goal, the equipment necessary to conduct the business effectively represents an appropriate component of the goods and services that may be provided. The "tools and equipment" service category should be applicable.

In the provision of training to blind clients under the Randolph-Sheppard program, state agencies often make use of the on-the-job training (OJT) mechanism to finance the provision of evaluation or work experience on an apprenticeship or comparable basis. The OJT is a subsidy paid to employers who provide training or work experience to clients. It is paid to them on the theory of recompense for the time taken to provide this training. (38) Its use is not confined to the small business enterprise program, but is available for any competitive placement setting. States are not required to participate in the Randolph-Sheppard Act at all, and in recent years several western states have dropped this component of the VR system. (39)

The problem with the OJT subsidy as a source of equipment financing lies in the belief of some counselors that the two are mutually exclusive. The impression seems to be widespread that where an OJT subsidy is offered on behalf of a client, additional purchases of equipment for that client cannot be made. While states would probably be within their rights in adopting such a policy, there appears to exist no such constraint or mutual exclusivity in the federal program.

In fact, while the OJT mechanism includes no requirement that employers pass-on any portion of the subsidy to the client or otherwise pay wages, there certainly exists no obstacle to their doing so. In those cases where the employer is willing to pass through all or part of the subsidy, there is no reason why it cannot be used for equipment.

Recognizing that vending facilities or other small businesses often cannot be established or maintained without capital equipment, a number of states have developed "initial stock" loan programs for their small business enterprise program clients. Typically, these loan programs have not so much contemplated adaptive sensory aids, but have focused on the more routine items that anyone would need, irrespective of vision, to run the business. It is in this connection that "initial stocks and supplies" are included by the federal regulations among the services that state VR agencies must agree to provide. (40)

These small business enterprise loan programs may utilize state funds. As such, it is important to consider the possibility that funds for the purchase of sensory aids could be included as an element of the overall capital costs intended to be covered.

In addition to these various rubrics under which equipment can be provided to individuals, Title I of the Rehabilitation Act also authorizes states to offer services to groups. (41) The use of this category has ebbed and flowed over the years, in accordance with general funding levels, and other policy and resource considerations. In those states which have elected to provide services to groups, perhaps the predominant form of this service, as it relates to technology, has been the provision of equipment to colleges and universities. In such cases, it is not essential that any one of the clients be independently eligible for the receipt of equipment as an individual. But for group services to be applicable, it is necessary that a majority of the persons utilizing the equipment be VR clients.

In those circumstances where groups of potential users are sufficiently organized, are adequately concentrated and have access to the necessary transportation, use of a group service rationale to provide equipment in centralized, but nonagency settings, may be worthy of exploration with the state blindness agency. Depending upon state law and agency policy, it may be possible to incorporate or otherwise create ad hoc organizations for this purpose, but existing entities such

as consumer groups or independent living centers can serve as appropriate repositories for devices obtained in this way.

(b) State Implementation

In order to implement the VR program, it is necessary for the designated state unit(s) to develop a variety of policies and procedures. These policies and guidelines must, as a practical and to some degree as a legal matter, be written down, so that personnel can refer to them for guidance and in order that federal officials can review them when necessary. Maintenance of written guidelines, policy statements and procedures manuals is a requirement to which states must certify compliance in their three-year state plans. Also, there are some states which have laws requiring that regulations adopted by state agencies can be valid only if filed or published in specified ways. Somewhere and somehow, the state VR agency must have a formalized and written-down definition of each of the service categories under which equipment could be provided.

Among the matters which state VR agency regulations should cover are the scope, timing, and other conditions of eligibility for each of the services under which equipment can be couched. Ideally, these guidelines will exist in an organized and accessible form such as a VR Services Manual or in the published regulations of state agencies. It is important for counselors to be familiar with these regulations and reasonable for clients to ask about them. Sometimes, the key instructions will be contained in internal memoranda or other unpublished transmittals. But where an adverse decision upon the availability of equipment is purportedly based upon the provisions of any regulations, whether published or unpublished, clients and counselors have the reciprocal right and obligation to know, verbatim and in detail, exactly what such regulations say.

Because states vary so enormously in their interpretations and procedures, no guide of tolerable length could possibly hope to detail what each does. Moreover, even if one could,

some major change would have occurred by the time it got to press. For this reason, the most useful approach is to provide an overview, intended to acquaint readers with the principal options in state response, and to alert them to those areas where state regulations most often pose major barriers to the provision of equipment in the VR process.

Before doing this, one feature of the 1986 amendments should be noted. In the future, states will be responsible for making clear exactly which of their implementation regulations and procedures are "state-imposed." This means that when states are exercising their discretion, they will have to make clear that that is what they are doing. This new mandate includes the obligation for the states to make clear when and how they are interpreting the federal rules. (42) As these requirements filter through the state plans, it should become progressively easier to identify the precise source of regulatory obstacles to the furnishing of equipment.

In this connection, it is also valuable to note that clients, professionals and consumer groups are likely to have more input into the content of state implementing regulations over the next few years. This is because the amendments materially expand the range of situations in which state VR agencies must seek public comment on their rules and plans. In a number of instances, these agencies are now even required to publish summaries of such comments together with the agency's response to them. (43)

Economic Need: As noted earlier, while federal regulations ban the imposition of economic eligibility standards for such services as job placement, states are free to utilize a means-tested standard for equipment under such service categories as "telecommunication and sensory aids," if they choose. Accordingly, it is important to know whether your equipment request comes under a service category for which the state has adopted a cofinancing requirement, and if so, exactly how such coparticipation will affect you or your client.

Several variations of such means-tests are commonly used. They may apply to all the services where they are permissible, or only to a few. They may bar provision of the service completely to those whose income or resources are above the cutoff point, or they may adopt sliding scale formulas for financial participation by clients, depending on the amount by which their incomes exceed the needs ceiling. If they call for such coparticipation rather than outright denial, a number of possible computational systems may be used.

The standard may be one of gross income or gross resources at a given point in time (say, the day you requested the equipment, the day you started employment, etc.) or the standard may be one of net income or resources (gross income minus deductible costs equals disposable resources). If the latter test is used, it is vital to know what the allowable deductions are, so as to ensure that one's discretionary resources are not inadvertently portrayed as greater than need be the case. Once the income standard has been determined, the question is over how long. The state may be looking for a percentage of yearly income, monthly income, or some other fraction.

The next question is as to the form of a contribution. Is the state looking for a given percentage of income, for a fixed or sliding proportion of equipment costs, or for a flat dollar amount? Finally, how is the required contribution to be made? Must it be paid upfront, standing as a prerequisite to the ordering of the devices? Or will the state, in effect, grant a loan by allowing the coparticipation share to be paid over time, with the equipment being purchased in the meanwhile? If payment is allowed in installments, over what period of time, and is it with or without interest? Does case closure or vesting of title to the equipment in the client depend on completion of time payments?

Knowing the answers to these questions, knowing every nut and bolt of them, is vitally important. This is so, not only because means for minimizing one's costs may be found, but also because the answers may have great influence on what

equipment is selected and on how the procurement process is strategized.

For example, if you know early in the VR process that an upfront payment will be required, you may have time to begin saving up for it. If the individual is an SSI recipient, this might include, as described in Chapter IV (b), seeking Social Security Administration approval for a Plan to Achieve Self-Support. With such approval under which the necessary sums can be accumulated without running afoul of Social Security's otherwise restrictive resource limitations. Similarly, if the coparticipation requirement is for a fixed dollar contribution, it makes sense to get the most complete system possible. But if the required copayment is some percentage of the equipment's cost, then exercising all ^{possible} ~~possible~~ economy in the selection process may represent the best strategy.

Many other examples of how this knowledge is useful can be cited. If a state implements client financial participation under the sensory aids service category, is it possible to have your equipment characterized under another service category, such as job placement, to which no such requirement attaches? Likewise, if a multicomponent system is needed, does the requirement apply to each item of hardware, software and supplies making up that system, or could the required coparticipation be achieved through the client's purchase of one of the items at the most convenient time? With respect to all these variables, getting or not getting the equipment may hang in the balance of often very narrow margins.

Dollar Limitations: A second and closely related area where state VR agency guidelines may make a key difference is in their imposition of flat dollar limits on per client equipment expenditures. As we have discussed above, states must include sensory aids technology among the range of goods and services they agree to provide for eligible clients. But there is nothing in the federal law to prevent them from placing reasonable limits or caps on the cost of equipment they will buy for any one client.

Where this is done, the limit will be expressed in terms of a flat dollar limit, with \$2,000 representing a typical figure. But even where the limit appears to be absolutely clear and unambiguous, opportunities and flexibility may still exist, if the determined client or the well-disposed counselor know the right questions to ask.

For example, it will be recalled that "sensory communication aids" and "tools and equipment" necessary to enter an occupation were listed as separate federal service categories. Does the state have separate limitations for each of these, or does its limitation apply to only one? If there are separate ceilings, can the limitations be cumulated by going to the limit on each? This will, in turn, depend on how "tools and equipment..." are defined in the state's guidelines, or whether they have been explicitly defined at all. Generally, "tools" have been construed to refer to standard devices, but it is reasonable to suppose that a modified standard device, used for the same purpose as its unmodified counterpart, is still a "tool."

Some states do make interesting distinctions, such as between "adaptive" and "employment" or between "specialized" and "standard" equipment. There simply is no substitute for finding out exactly what these distinctions mean, what loopholes they allow (or intentionally create), and what circumstances and devices they actually do and do not cover. One might even ask whether the limitations are meant to apply over the lifetime of each client, or if they apply separately each time the person is rehabilitated. Other questions can similarly be raised. Such regulations put a premium on imagination and creativity, but looking at them can often be quite a lot of fun, particularly if technology and greater independence lie at the end of the search.

A final point worth noting here is that with these, as with almost all across-the-board, blanket provisions, there is no harm in asking about exemption or waiver provisions, or in inquiring whether and how any prior exemptions may have been granted. It is likely that some such possibility will exist, espe-

cially if the nominal rule has been in effect for any length of time. If there is a precedent for making exceptions to the rule, pursuant to what documentation, what justification, and whose approval can it be invoked?

Client financial participation and dollar limit requirements can interact in two interesting ways. If the available cumulative dollar limit is less than the cost of the required equipment, the difference amounts to a client copayment requirement, whether the state VR agency meant to impose one or not. In such a case, no less than in the situation of an explicit coparticipation requirement, the means by which the gap is to be bridged, as well as the choice of components or systems themselves, may depend in large part on the precise mechanics of the state procurement process.

If that procurement process involves the purchase of equipment for cash, then presumably the difference will have to be made up from somewhere, before anything happens. If, by contrast, the VR agency operates under a purchase order system, or if it delegates purchasing authority to a private agency, greater room to maneuver can usually be found to accommodate acquisition of the equipment while arrangements for making up the difference are being completed. This will depend, too, on the policies of the suppliers and vendors in question regarding extension of credit to the state, to private rehabilitation agencies or to clients. If the state uses a cash payment system, the willingness of a vendor to accept a purchase order may not help the client, unless the state is willing to issue one. If the state will use purchase orders but the vendor won't accept them, selection of different equipment may represent the best means of avoiding that same problem. As we will discuss in Chapters V and IX, private agency guarantees of client credit can often be useful as low-cost methods for overcoming these and other bottlenecks.

The main point to be stressed in all this is quite simple. A would-be equipment user needs to know as early as possible whether any financial participation requirement exists, but a

broad indication that it does tells you very little about how it will apply in your case. By asking the right questions opportunities may exist for reducing the amount of the payment to tolerable levels, for delaying the obligation to pay until you are earning some income, and for making sure that administration of the copayment requirement will not delay procurement.

Source of Equipment Recommendations: While the federal VR program evinces a strong preference in favor of medical practitioners and other suitably credentialed health and human services providers at every stage of the VR process, there is no generally recognized medical, rehabilitation engineering or other professional discipline with primary jurisdiction or expertise over the adaptive sensory aids technology that blind and visually impaired people need. With the exception of CCTV's and other electronic magnification aids sometimes recommended by low-vision clinics, information pertinent to the selection of adaptive computer systems for this population is extremely decentralized. Wheelchairs, hearing aids, artificial limbs and similar devices utilized by other disabled citizens are subject, like their providers, to various forms of governmental approval and provider licensure. Such is not the case with the computer equipment that blind people use.

On balance, this is undoubtedly to the good, but in those states where the commission requires a suitable professional to do the assessment and "prescribing," certain difficulties can arise. To varying degrees, many states adhere to a "medical model," under which technology, like other goods and services, must be "prescribed" by an appropriate professional, certified and selected by the agency for this purpose. In such a case, even a clear sense on the part of the client and counselor of what is needed may not be enough.

Situations may thus arise in which identifying someone who is authorized to recommend equipment becomes a major step in itself, or in which the translation of one's needs through the precepts or preconceptions of some supposed ex-

pert comes to represent yet another potential pitfall in the process.

In states which use the medical model for assessment or prescription of technology, the consultants chosen to make these recommendations may be individuals or organizations. Having served as such a consultant myself, I can readily attest to the randomness with which these selections may be made. Even assuming a high degree of experience and expertise, a prescriber's role may require a significant amount of client input, if it is to be effectively performed. When working with any rehabilitation engineer or other consultant, it is necessary to remember that technological sophistication is not the only concern. It is also necessary that the consultant understand the "human factors" considerations underlying effective choice. It serves no purpose to recommend the most advanced system possible if the complexity of the configuration will so attenuate the learning curve as to render the technology functionally useless for a long time after it is received. Similarly, there is little point in recommending, as a matter of routine, the cheapest system for accomplishing the functional goals of the application, if additional needs can reasonably be foreseen and planned for in an integrated fashion.

Beyond human factors, the consultant must also understand the impact of state procurement practices upon the VR agency's ability and willingness to implement the recommendations. The consultant's recommendations may be technically superb and cost effective, but if they involve components which the VR agency cannot readily obtain, or if they precipitate inordinate procurement delay, they may as well not have been tendered at all, in far too many cases.

Where rehabilitation facilities or other private social services agencies do the prescribing, two further considerations need to be addressed. First, there may be ambiguity about the agency's proper role. Often clients will assume that it is simply one of identifying the proper components, but the agency may regard its function as involving a broader assessment. If so,

this assessment may be viewed as part of a larger package of services, which, if nothing else, can materially lengthen the process.

Second, where there is some question about what will be prescribed, about the potential of technology or about evaluating rehabilitation potential and meeting IWRP goals, the identity of agency personnel who participate in the case may be as important as the mandate given by the state agency when it requested the service. If the agency's counseling staff is going to be involved in the assessment, their perspective may well differ from that of a technology trainer or vocational placement specialist. One should try to galvanize support for the equipment among all staff members who are involved by emphasizing its role in whatever terms are most meaningful to each.

Where an evaluation of potential and need must accompany or precede component selection, it is advisable to learn, so far as possible, what criteria are being used. Assessment of client capabilities and need have been a central theme in rehabilitation practice for decades, but when it comes to identifying clients who can benefit from technology, no consensus exists as to what standards should be applied. Some agencies may look to psychosocial or attitudinal variables, others to clerical skills, manual dexterity or tests designed to determine levels of verbal intelligence or motor skills. On average, the measures that agencies will employ will be those they are accustomed to using for other assessments. These instruments may or may not be relevant, but as long as they fill a vacuum they will continue in use.

With time, mainstream tests of computer aptitude and literacy will be adapted and validated for use with visually impaired clients. In the meantime, state VR agencies face the need to somehow ration a still scarce resource, and to somehow rationalize its grant to some clients and its denial to others. In some sense, technology is likely to remain for a little while longer a reward to the "best" clients.

At the very least, where the ground for denial of equipment rests on some negative assessment of the client's capacities, the counselor, if confident in the soundness of the evaluation and if persuaded of its relevance to the issue, should not hesitate to discuss openly with the client what the relationship is between the assessment and the decision.

In a number of states these technology recommendations are made by a unit of the state VR agency itself. This may be a technical aids center, a state orientation center or some similar unit. Clients and referring counselors should not assume that the ambiguities mentioned in this subsection will automatically disappear simply because the evaluation and equipment selection are being conducted within the same agency. The people at the tech aids centers are just as human as anyone else. They have their likes and dislikes among components and systems; they have software with which they are more and less familiar; they have their own rules of thumb for deciding which clients will do well with equipment, and they have their own experience about what equipment has proved successful in various work settings.

Also, the fact that the entire matter is being handled within a single agency does not guarantee effective communication between the referring counselor and the people making the recommendations. In fact, if there are jurisdictional disputes within the agency over the control of its technology program, these may be harder to deal with than disputes between unrelated agencies would be.

Similar Benefits: There are a number of situations in which states are permitted or required to explore the availability of goods or services from other sources. This means that in certain situations a state VR agency can refuse to provide various services to a client until the possibilities of obtaining them from another source have been explored. How or whether state VR agencies apply this "similar benefits" requirement to equipment can therefore have considerable bearing upon the timing of procurement, upon the documentation of unavail-

ability of the equipment from other sources that will be considered satisfactory, and upon the order in which various potential sources should be approached.

Rehabilitation engineering services will not be subject to similar benefits. As a result, clients who seek this service will not need to try to get equipment from somewhere else first, and will not need to show that they made any efforts to do so. Despite this favorable treatment of rehab engineering under the law, the similar benefits concept has come up from time to time in state interpretations of the "sensory and communication aids" service category. When this happened, it was usually little more than a nuisance, since no other sources for equipment were available. But there is now another "similar benefits" problem looming on the horizon.

State-sponsored disability equipment loan funds and nonprofit agency loan programs are being established around the country. These programs, which are generally not administered by VR agencies, will be discussed in Chapters V and IX. For the moment, although these programs are very constructive, one note of warning must be sounded. It is likely that in states which establish such programs, some VR agencies may insist that their clients approach these alternative sources first. Since many of these new loan programs also consider themselves to be "last resort" sources, they will in turn probably insist that VR sponsorship be sought first.

The possibility of a certain amount of bouncing back and forth thus exists. But stalemate should be avoidable in a number of ways. Central to these is the recognition that what each source requires of the other is more a formality than a matter of substance. For example, from the standpoint of VR, it probably will not matter why the loan fund has rejected an application, provided only that the application process was pursued in good faith. If the applicant has gone through all the motions, that should suffice.

By the same token, rejection of one's application by a state loan fund is not likely to prejudice reapplication at a later time.

The application to the state loan fund, though largely pro forma in such cases, can in fact be put to good use, since it gives the would-be equipment user a chance to become acquainted with the program procedures and requirements.

Timing: Some states may choose to make equipment available only after clients have reached a particular point in the VR process. Viewing the rehabilitation process as a series of steps and events leading from "application for services" to "case closure," the individual can move through as many as eight different "statuses." Status Code 26 (case successfully closed) is the best known of these statuses. Status 22 (in employment) means that the individual has completed rehabilitation activities and is ready for employment. Status 20 (ready for employment) is the code that most frequently applies to clients who are engaged in job search activities.

It is therefore imperative to ascertain whether your state requires that you reach a particular status code (say, Status 18 or Status 20) before equipment will be provided. If such a trigger mechanism is utilized, the key question becomes its timing in relation to the need. Where, for example, attainment of Job Readiness (Status 20) is the triggering event, this may be early enough, provided the client has some means of acquiring basic familiarity and training with relevant devices at a prior point. But if the triggering point does not occur until job placement (Status 22) has been secured, then inability to acquire and install necessary devices in time to meet the reasonable expectations of an employer can fairly be anticipated.

For the individual who expects to enter equipment-dependent employment, these trigger mechanisms can pose grave dangers. In the same way, they can jeopardize much good work that counselors have done. There are several steps that can be taken to minimize potential harm.

First, clients should always inquire whether any such restrictions apply to the timing of procurement. Where counselors can anticipate this sort of delay in the commencement of procurement activities, they should raise the issue sponta-

neously. Where a problem can be anticipated from this source, several solutions are worth considering. On the assumption that a trigger mechanism could delay the arrival of needed equipment until well after the commencement date of employment, one worthwhile approach may be to provide inducements to the employer, such as the OJT subsidy, to compensate for the loss of productivity resulting from this delay. A second important inducement, discussed in Chapter VI, is the Targeted Jobs Tax Credit, which has recently been reintroduced, and with which VR counselors should make it a point to become thoroughly familiar.

A second response to the artificial delays associated with triggering has been to defer the start-date of the job, but this can sometimes backfire. For if the state uses attainment of Status 22 as its triggering mechanism, deferral of work may prevent the very event (namely, starting employment) which is necessary to initiate procurement.

There is another timing problem, far more pervasive and serious than that resulting from triggering. Chiefly because of the role played by other state agencies in the rehabilitation equipment procurement process, substantial delays often ensue between the time a VR agency decides to furnish a client with technological devices and the time when such equipment actually shows up. Pending its further discussion in Section (d), it is enough to note that inordinate and unpredictable delay is at least as great a problem as outright refusal in today's rehabilitation environment. To understand these issues well enough to anticipate them represents the client's and the counselor's best short-term hope.

As the foregoing examples (economic need, dollar limits, expert prescribers, similar benefits and triggering mechanisms) suggest, there are many ways in which a state's interpretations of the federal law can prove more decisive than that law itself in determining who will get equipment. Many other ways exist in which state interpretations of the federal mandate or state exercises of discretion under that mandate can

result, whether intentionally or not, in the narrowing of eligibility for equipment. States can define specific services in ways that narrow their scope, and, as we will see below, state VR agencies must also abide by other state laws which often have the same effect.

Clients and counselors have the right and duty to at least make sure of certain things. They must find out whether the state plan limits access to equipment more narrowly than the federal regulations do, and if so they must ask why. They must find out whether any of the state agency's regulations, policies or definitions restrict equipment availability more tightly than does the state plan, and if so they must ask why. They must clearly understand the precise nature and scope of any obstacle that purports to come from these regulations or policies, and they must ask why.

The foregoing list of VR agency guidelines is meant to be illustrative, not exhaustive. State discretion in the application of the federal mandate can raise innumerable other issues as well. Yet, for all the variation in state procedure that these examples reveal, perhaps the most important type of discretion is that exercised, informally, by counselors and by agency managers in their day to day decisionmaking and work. Without some discussion of this more subtle discretion, guidelines and written rules can yield very little of what equipment seekers most need to know.

(c) Discretion

For anyone who has ever worked in or dealt with any organization or bureaucracy, it is axiomatic that discretion, attitudes and personalities have as much to do with decisions as any formal guidelines or written rules. If this truth is axiomatic in the world at-large, its reality is even more dominant in a rehabilitation and service system where so much scope is afforded to decisions made "in the best interests" of clients. When a rehabilitation or any other agency wants to do something, it will probably find a way to do it. When an agency doesn't want to do something, it will usually find a way not to.

Armed with these truisms, it is important for the client to think seriously about how the agency can be persuaded to exercise its discretion in favor of providing technology. The more that a counselor or agency believe that equipment will contribute to a client's successful outcome, the more they can be persuaded to believe in that client's potential as an equipment user, and the more help the client can give them in overcoming and identifying the technical and administrative barriers to its provision, then the greater will be their willingness and ability to provide the necessary support.

Lest this be read as an endorsement for Dale Carnegie, it should be recognized that creating this image and providing such assistance may not always be without risk. For the client who seeks to urge consideration of technology upon a counselor from the earliest point, or who is persistent in questioning or apprising the counselor of the administrative obstacles to its acquisition, the danger of being perceived as aggressive or overbearing is all too real. But if the client remembers that the counselor, too, may be subject to difficult managerial imperatives, onerous paperwork requirements, and the demands of many people, then the risks of meaningful participation should be well worth taking.

State commissions tend to be small. In many instances, the client may know at least the local managers who actually make, or who must "sign-off" on the key decisions. Whether combined or separate agencies, the commissions are likely to be characterized by a degree of informality. There are pros and cons about getting to know the managers, but it never hurts to find out enough about the organizational structure to identify the individual, if it is not the counselor, who actually makes or approves the equipment decision. In this connection, it is also important to understand exactly what decision is on the table. The decision to include technology evaluation or equipment-dependent goals in an IWRP is usually a simpler, and lower level one than the determination to expend thousands of dollars. For this reason, the earlier and the more often one can

get the little discretionary decisions to be made in favor of technology, the greater is the momentum that will be built up in favor of comparable, if larger, decisions further down the line.

It is in just such ways that the big-ticket, high-profile equipment decision can be broken down into numerous smaller decisions, requiring less discretion and indeed less bravery. Let us suppose, for instance, that one's vocational goal is technologically dependent or could be enhanced by suitable equipment. One strategy is to simply wait and ask for the equipment at what seems the proper time. Probably a better strategy is one that starts unfolding a good deal earlier.

When vocational goals for the IWRP are being formulated, the client can suggest (and the federal law now supports) that assessment of technology's potential be made one of the informational elements to be gathered. To the degree that the counselor may want the client to investigate the proposed occupation or field, this assessment fits in very snugly.

When the client returns, able to indicate that technology has facilitated the kind of work in question, it is reasonable either to suggest that appropriate training in its use and planning for its acquisition be incorporated into the schedule of IWRP activities, or to inquire whether the necessary technology will be forthcoming after successful completion of the other elements of the plan. At this point, if the counselor has serious reservations about technology, either in general or as it relates to the particular individual, they are likely to come out. If so, one can find out what might be necessary to bring about a different decision. If not, one can proceed to the next step.

Even if one has been denied services because deemed incapable of benefiting, it is neither unreasonable nor terribly threatening to ask if technology might not be included in one's evaluation or extended evaluation, so as to ensure that outcome goals or rehabilitation potential which it might facilitate have not been inadvertently overlooked. Such a request is a good deal harder to deny than one for thousands of dollars

worth of equipment, yet it may represent the first step toward reaching the equipment goal.

If all goes well, one will eventually reach a point at which refusal to supply the necessary technology makes no sense. If the counselor has subscribed to an outcome goal which is mutually understood to be technology dependent; if technology training and assessment have been incorporated into the IWRP, and if the client has lived up to all reasonable expectations and obligations, then momentum has built up powerfully toward a favorable exercise of the ultimate discretion.

Even when the state VR agency is willing and eager to sponsor a client for equipment, there is no certainty that they will be able to do so, however. It is to this, the most frustrating secret of VR, that we must now turn.

(d) Other State Agencies Involved

In some ways, this topic is the most important and the most bedeviling of all. It involves a number of state agencies having no sustained commitment to the VR process. It is a topic that requires our introduction to the subject of public contracts law.

When a state VR agency purchases equipment for a blind rehabilitant, its actions are governed, not only by the provisions of the federal-state VR system, but also by all the state's laws which control how public money is spent. It does not matter that 80% of the funds are federal, and it does not matter that a laudable objective underlies the purchase. From the standpoint of the state, the issues are no different from those that would be involved were the VR agency purchasing equipment for itself, or were contracts for the purchase of snowplows or the building of a new highway being let.

This is a dimension of the equipment process of which even VR personnel have little knowledge. It is an aspect of the technology problem which has received little or no attention in the rehabilitation literature. Yet, state public contracts law has more to do with the inability of VR agencies to follow through on their commitment to clients, with the unpredictable time-

frames that plague technology recipients, and with the inability of clients to get the precise components they need than any other variable in the system. Most important of all, this external constraint upon the VR process ordinarily comes into play only after VR agencies have decided to provide technological support.

The state procurement laws applicable to a VR agency will raise these questions: who actually has the power to make the purchase? Does the process vary according to the nature or cost of the item? What documentation requirements, or review and approval authority are involved? What limitations are there on the cost or the range of items VR can purchase? What timeframes are applicable to the procurement process? And what access does the VR agency have to the other state agencies involved?

As taxpayers, none of us would feel particularly comfortable about a governmental structure in which every state agency could spend money when and how it thought best. Sometimes, though, the central purposes of rehabilitation are unintentionally subordinated to larger public accountability and managerial goals. Unfortunately, this may be especially true in the cases of blind rehabilitation clients, because their numbers are relatively small and their equipment needs are somewhat more diverse than in the case of other disabled population groups. The small size, relative isolation and frequent hesitancy of the commissions to "make waves" may further contribute to the situation.

To say that a state VR agency has decided to purchase specified components for a given client is not necessarily to say very much, as all too many clients have learned. Those persons who have endured lengthy delays, as their requests rattled around the seemingly impenetrable state bureaucracy, can readily, in some cases bitterly, appreciate how this is so.

Broadly speaking, several legal patterns surround the procurement of individualized rehabilitation technology by state commissions or other rehabilitation agencies on behalf of

their blind or disabled clients. Commissions can be authorized to purchase equipment directly; they can be authorized to delegate purchasing authority to a private agency (or in some very rare instances, to the client), or they can play the role of providing information and justification to a centralized state purchasing authority which does the actual buying. These may be described as the direct purchase, the delegated purchase and the centralized purchase models of procurement.

With a multicomponent system — the kind of system requiring hardware and software items that differ in sources and cost — a combination of these will typically be involved. It follows, with respect to each component of a proposed system, that the client and counselor must understand exactly who will purchase it, what approvals are required, what difficulties and timeframes are likely to apply, and whether some equally satisfactory component might be available more easily or more quickly.

The ideal situation is one in which the VR agency is authorized to purchase whatever the client needs. After all, one of the historic reasons for the existence of the state blindness agencies is their supposed expertise in meeting the special needs of blindness. Such simple approaches, with or without notification requirements to centralized state budgeting or purchasing bodies, do exist, but are not common. More widespread are arrangements under which direct VR agency purchasing authority does exist, but is limited in some way, either to items that do not exceed a specified cost, items that have been specifically pre-approved for purchase, or items of a nature that state agencies do not routinely purchase. On average, the more involvement and responsibility the VR agency can have in the procurement process, the more smoothly things will go.

If we were dealing with a specified cost ceiling (say \$1,500) on what the VR agency can spend directly, then the cost of the computer, CCTV or other device in question would become an issue. Equipment costing more than that sum would activate a

different purchasing system. Likewise, the question of whether such cost limitations applied to the entire configuration, or were applicable on an item by item, purchase order by purchase order, or vendor by vendor basis, would become important. If the maximum dollar amount the VR agency could spend was \$1,500, it would make all the difference whether that figure applies to each client or to each separate item purchased for that client.

If the limitation is a per item one, can this be further broken down? Let us say, for example, that it is a \$1,500 per item limitation, but your computer costs \$2,000. Can it be further subdivided by using one purchase order for the central processing unit (CPU), another for the disk drives, a third for the monitor?

The second version of a direct purchase system is VR agency authority to purchase designated and pre-approved items of equipment, regardless of cost. Approval is typically reflected on what is called a "state contract," under which the state has agreed with one or more vendors to purchase the item in question at an agreed price. Under such a system, the VR agency should ascertain whether the devices that will be needed are "on contract." If not, what will be necessary to get them "on?" If they cannot be gotten on, is there some alternate component, already on or more easily gotten on, that will do?

The competitive bidding process, usually employed by the state for putting equipment "on contract," can often result in limitations on what is available. For example, a state may decide that it wishes to have only one paperless braille, hard-copy braille printer, CCTV, etc. on contract. Depending on when the contract was set up, and depending on which specific device was being ordered, the one on contract may not be the cheapest, and certainly may not be the one that best meets your needs.

Some VR agencies have good enough relations with their state purchasing entities to get additional devices through, even when the central state officials don't really appreciate the

subtle differences. At other times, central state officials will not want the inconvenience of multiple items in any one category, may demand to be shown why an exception or apparent duplication is necessary, may contend that the version already approved for purchase is just as good, or may respond in any of a thousand other ways.

If you are dealing with a standard microcomputer, the problem is likely to be less difficult, because the IBM's and Apple's most often selected are likely to be approved for state purchase. But even here, arbitrariness and frustration may be encountered. It may happen that only the Apple IIc, and not the IIe which you need, is on contract. It may be that the IBM PC has been dropped from the approved purchase list in favor of a less expensive look-alike. It may turn out that the PC approved for purchase is the one with 256K of internal memory, and that the expansion card you will therefore need to meet the higher memory requirements of your system is not among expansion cards which the state is purchasing right now. It may be that between the time your components were ordered and the time your order was processed, the state or its approved vendor switched from the PC to the Personal System 2. It may, in short, be almost anything.

And even where the standard items for your system are available, the adaptive components may still be a matter of concern. Among the numerous systems that now exist for enlarged screen or synthetic speech output from standard computers, for example, the state contract model may have implications for which of them are, and which are not, easily available. Sometimes, where, as is often the case, there is more flexibility in the purchase of software than of hardware, a software-based output system may be easier to get.

In some cases, approval or pre-approval can be given for "sole source" purchase without the need for competitive bidding or the usual contract. Depending upon the state, criteria for this exception may include cost (for example under \$10,000), availability from only one source, character of item

as not ordinarily purchased by the state, or other factors. The question of what documentation and what approvals are necessary to mark the "paper trail" for such a sole source designation should never be subsumed under the question of what the criteria for that designation are. Obviously, this procedure for getting an item approved for purchase is ordinarily preferable, since it eliminates the time required by the state to solicit, review and select competitive bids.

The third basic pattern, under a direct-purchase system, allows the VR agency to purchase only specialized items. Under such a system, adaptive devices, specialized software and the like can be purchased by the agency only when they are not of a sort that governmental organizations would routinely buy, or when they are specifically designed for use by visually impaired persons. This can work well, but in the cases of mixed systems (those consisting of both adaptive and mainstream components) it has sometimes resulted in the software, speech synthesizer or enlarging monitor being immediately purchasable as "specialized," while the computer itself takes much longer, because standard.

Paradoxical as it may seem, substitution of a paperless braille, costing three to five times as much as a standard computer, may represent the best means for avoiding such incongruities and delays in a state whose commission has specialized item purchasing authority. Much will depend on other intricacies of the overall state procurement system.

One approach that some state VR agencies have adopted is that of stockpiling equipment, through purchase for agency use. Such an approach cannot ensure the range or level of supplies necessary to meet every need, but it can reduce delay and minimize frustration in a number of cases. If there are items and systems thus stockpiled in your VR agency, and if they are available to be given or lent to clients to bridge the gap while permanent equipment is being procured, one might be well-advised to choose them, if they have any capacity of meeting the functional needs at hand.

Availability of equipment from commission resources or reserves is most likely in those states having in-house technical aids centers. Almost by definition, such centers must have some equipment around in order to carry-out their evaluation or training responsibilities. Mechanisms for loaning some of this equipment to clients for bridging the procurement gap may well exist. If this has not been done, each client may represent an opportunity for trying something new. The fact that it has never been done before may simply mean that no one has thought of it yet.

As noted above, there is one other model of direct VR agency purchase that you may encounter. This is a system where the VR agency has authority to purchase, but does not do so directly. Instead, it purchases through a delegate, usually a nonprofit agency, which either makes the purchase subject to later reimbursement, or which receives a voucher or service request that it in some way rolls over. These delegation systems have arisen for several reasons. The leading reason is to bypass delays that result from state purchase, and to take advantage of a system and of relationships that are already well-established in connection with the provision of routine goods and services in the rehabilitation process.

Where delegations are used, they will typically be available for items costing under a certain amount of money, for items of a specialized nature such that they will not be eligible for state contract, or for items meeting both of these criteria. Agency practice in the handling of these delegations will also vary. If a delegation is pertinent, clients and state VR counselors must know exactly which component can be obtained and expedited through this mechanism, what agency will do it, and how the agency handles the transaction.

Even where state VR agencies have the authority to purchase equipment, directly or by delegation, other state agencies may retain some pro forma "sign-off" authority. No matter how perfunctory this review may be, even if it involves only the issuance of a check by the state comptroller upon request,

it can create bottlenecks. Anyone who has the power to sign a piece of paper also has the power not to sign it. Moreover, the less substantive is an official's responsibility in a particular matter, the more understandable is it that this tiny issue will be pushed to the bottom of the hold basket as more important concerns compete for attention.

Beyond direct VR agency purchase of equipment, the other major state procurement pattern that VR clients are likely to meet involves centralized purchase of all state goods and services by a single state agency. This centralized state purchasing body may be a state office of general services (similar to the federal General Services Administration), a state comptroller, state budget bureau or equivalent entity. Again, the power to purchase is understandable only when supplemented with information as to the precise distribution of approval authority. Altogether there are systems so cumbersome, so elaborate in their efforts to ensure accountability or to diffuse responsibility, that as many as three state agencies, in addition to the VR agency which initiates the request, may be involved in the process.

No attention to the ins and outs of procurement can be too detailed. The necessary inquiries, which are incumbent on VR counselors as much as on clients, should focus on understanding all the steps, all the paper trails, all the officials and agencies involved in the procurement process, and all the loopholes and shortcuts that exist. Only in this way, can reasonable estimates of timeframes and component availability be made. Yet, in too many cases, VR agency procurement decisions have gone into a timeless limbo, from which they can never be retrieved.

In tragically many cases, blind rehabilitants have lost bona fide jobs, despite full VR agency commitment to the provision of necessary technology, simply because the state procurement process was not adequately anticipated or fully understood. Beautiful configurations have arrived on clients' doorsteps too late to be of use, because the job has disappeared. In still other

cases, some components have arrived, but are useless, so long as others, even including items so simple as cables, remain hung-up in the process. With awareness and planning, such tragedies, and such comedies, can be averted.

Because of the dispersion of responsibility for approval and purchase among state agencies in centralized-purchase states, keeping track of the status of a request may prove particularly difficult. Knowing the process and anticipating bottlenecks can help, but even when the most effective strategy and choices have been arrived at, unforeseen problems and delays can still occur.

In this connection, it is first important to remember that VR counselors do not necessarily get feedback on what is happening. Their agencies may or may not be contacted for further information, or to be informed of a glitch, but there is no certainty as to how or when this information will filter back. Who to ask may therefore emerge as a key threshold question in its own right. Here the counselor and the VR agency have a responsibility, not only to understand the process, but to be advocates for their own rehabilitation decisions.

At this point an additional complexity must be noted. In those states where the rehabilitation of blind individuals is handled by a "separate" agency, the procurement rules governing the work of that agency may not always be identical to those applicable to the coordinate, generic rehabilitation unit. Such discrepancies are most likely to arise in states where the commission for the blind and the general rehabilitation agency are housed in different departments of state government. The purchasing authority of the blindness agency may be greater or less than that of the generic body.

General information about the procurement process will typically deal with the larger, better-known, generic agency. But in a dual VR agency state, one must make certain that what one is being told applies to the blindness agency as well. If the blindness agency is, for example, part of the state social services department, while the general agency is independent

or part of, say, the state department of education, there is a strong likelihood that this will imply some lack of uniformity in procurement procedures between the two.

Having used the term "documentation" several times in this discussion, it is still important to reemphasize that a smooth procurement scenario rarely depends upon the niceties of rehabilitation theory or on the merits of the request. Far more often, its speed and success hinge upon the discretion, zeal and commitment of individuals and officials, on the quality of relationships among state agencies, and upon matters of form and formality sometimes so trivial as to be laughable, were not the destinies of real people at stake.

If the proper paper trail has not been blazed, no equipment will come out of the pipeline, even if all concerned look on the proposed purchase with equanimity. If the signature of a designated official or the completion of a numbered form is required for the issuance of a purchase order or the cutting of a check, the absence of that scribbled endorsement or scrap of paper may stalemate the entire process, irrespective of the intention and sensibilities of the functionaries involved. While goodwill plays as instrumental a role here as it does anywhere else, there are limits to what its cultivation can accomplish.

Even where the procurement process is fully understood and adroitly approached, the complexity of the process may make prejudicial delay unavoidable. Where this is the case, consideration should be given to combining VR equipment that is available with equipment derived from the sources discussed in the succeeding chapters of this guide. VR agencies should also give consideration (see Chapter IX) to bridging strategies for assuring service continuity and outcome success in those instances where they cannot guarantee that their rehabilitation decisions will be implemented fully or quickly enough.

In those situations where procurement of necessary hardware and software drags on for many months, it may still be possible to start the job. Where this is done, initial job duties may have to be at a lower level than intended or than will be the

case once the equipment is delivered and set up. If the parties are not careful, premature closure of the VR case can result in the individual's being locked in to this lower level status.

Although the federal regulations allow state VR agencies to close cases after sixty days in employment, closure should never take place until all the equipment is up and running. If the case is closed prematurely, unavailability of some of the components, or failure of the components to interface or work as planned, may be far more difficult and time-consuming to remedy than would otherwise be the case.

The desire of state VR agencies to rack up "successful" outcomes as quickly as possible is understandable. But if this temptation is yielded to before the equipment is in place, recourse to the cumbersome process of full case reopening — with the paperwork, medical and eye reports, time, etc. that are involved — may provide the only means for remedying a problem or for adding even minor additional components.

Remember, too, that if placement, even in the context of temporary underemployment, was possible without the equipment, post-employment services may not be available for modifying or supplementing the configuration, since job loss will not necessarily threaten. On-site training or setup assistance needs can also be better accommodated if case closure is deferred to an appropriate point. VR agencies may have policy guidelines concerning the timing and rationale for case closure, but truly successful outcomes cannot be deemed to have occurred until the equipment is fully performing the tasks and functions for which it was intended.

(e) Client Protections

A number of due process protections are built into the federal law. Under the federal law each state plan must include provision for "fair hearings" (44) to clients who object to any decision or action in their cases. Short of the fair hearing, VR agencies will also have informal case review and case conference mechanisms for adjusting disagreements or resolving misunderstandings. Since 1984, each state is also obliged to

establish a client assistance program (CAP), (45) for the purpose of advocacy and for policy change on behalf of VR clients.

The 1986 amendments make changes in each of these areas. Those changes pertaining to the hearing requirement may be particularly significant. They provide for greater assurance of objectivity in the selection of hearing officers to decide administrative appeals; for greater opportunity for submission of additional evidence by clients at the appeals stage; for greater likelihood of personal review of the hearing by the VR agency director, and for more specificity in the content of written decisions on these appeals. (46) While these client due process protections play a valuable part in the VR process, their utility in bringing about favorable equipment determinations is likely to remain limited.

It is dangerous to overgeneralize, but it does not appear that any of these procedures hold much promise of getting state VR agencies to reverse decisions not to furnish equipment. Nor are these forums likely to be of much help in hastening delivery, once the decision to provide equipment has been made. This is true for three reasons.

First, where the VR agency declines to furnish equipment, it can usually articulate a reason for not doing so which is sufficient to pass muster under the law. There are a few situations in which equipment may be mandated, but in the overwhelming majority of instances, the broad discretion vested in the state VR agencies under the federal law is sufficient to prevent a finding that it has been improperly exercised or grossly abused.

The second reason why these due process protections offer the would-be equipment user little solace is that, where the procurement problem lies outside the VR agency, the other state agencies and officials involved are not subject to the jurisdiction of either the fair hearing or the CAP. These client due process rights relate only to what goes on within the VR system. Their writ does not run to the negation of other state

laws or to the modification of the role of other state agencies in the public contracts arena.

The third reason for pessimism is that even if the case is one of those exceptional few in which the VR agency's policies or exercise of discretion violate federal requirements, there is no guarantee that equipment will be provided. Some change in agency policy, or the imposition of some sanction by the federal oversight agency, are just as likely. Moreover, even if provision of the equipment to the individual claimant were to be the end result, months or years may elapse before this comes about. No real-time contingencies or personal goals could possibly be predicated upon the outcome of such a process.

Nevertheless, review of the case law under the Federal Rehabilitation Act does suggest the existence of some few situations in which equipment must be provided. If such a situation is at hand, recourse to one of these administrative remedies, or even to the courts, may hold some promise.

The first of these would be situations where the state plan, or state implementation guidelines under its plan, are substantially out of compliance with federal law. Where, for example, the guidelines effectively narrow equipment eligibility to the point where no one can realistically expect to get it, it may be the case that the state has in effect refused to provide one of the required services. Similarly, if the individual's IWRP specifies a vocational goal that can only be achieved with equipment and that the VR agency continues to regard as reasonable, then the refusal to follow through on the IWRP by providing the agreed upon equipment may be arbitrary and improper.

A third situation in which VR agency refusal to furnish equipment may be open to effective challenge are those cases in ^{which} ~~when~~ no IWRP goal can be formulated without equipment, but in which an acceptable outcome could be postulated with its use. Such cases are most likely to come up where there has been a determination of ineligibility for services, or where the VR agency has decided to close a case as "not rehabilitated."

They would involve the refusal of a VR agency to provide services because no vocational goal can be formulated. If equipment exists through which one could be designed and achieved, but the VR agency has refused to take this possibility into account in denying services or in closing the case, justifiable grounds for complaint may exist.

Individuals who are denied equipment or refused all services on these grounds might well consider contacting their state's CAP. But in doing so, they should be mindful of what the CAP's can and cannot do. As specified in the federal law, the CAP's have a threefold basic thrust. They are supposed to explain the VR process and its available services to clients; to engage in advocacy on behalf of clients, and to seek settlement of disputes, where conflict persists. Their usefulness to an equipment seeker largely depends on the local interpretation of the word "advocacy."

CAP's are permitted to file lawsuits on behalf of individuals. But this is likely to occur only where some serious shortcoming in VR agency policies lies at the root of the individual's inability to obtain equipment. Even here, the CAP's are barred by law from filing class action lawsuits, though such suits represent one of the major vehicles for citizen challenge of the practices of governmental agencies in the wider society.

Beyond intimidation value, lawyers are generally not of much help either. Even those few who are knowledgeable about administrative law in general and about the VR program in particular will rarely possess the expertise to prove that equipment is necessary to achieve a specific IWRP goal, to refute an agency determination of client incapacity to effectively utilize the equipment, to show precisely what equipment would best enable the client to attain previously agreed upon program goals, or to overcome the strong presumption in favor of expert decisions made by skilled rehabilitation personnel in client's "best interests."

Intimidation is a double-edged sword. No one would be surprised if a good faith agency decision, even if misguided,

came to be supplemented by resentment and resistance if such tactics are used. Similarly, appeals to legislators or other politicians, while occasionally successful, run the risk of stiffening agency resistance and further polarizing the situation. The squeaky wheel does indeed often get the grease. But other times the axle falls off and is left by the side of the road.

In closing this chapter it is appropriate to sound an optimistic note. Despite the obstacles, state VR agencies have steadily improved their utilization of technology over the past several years. When one considers the normal lag between the introduction of new technology and its systematic incorporation into society, much of this progress is truly remarkable. Absent major cutbacks in the federal VR program, which Congress has thus far resisted (and which the budget authorization levels contained in the 1986 amendments suggest it will continue to resist), clients and agency staff can continue to play a decisive role in the continuation and extension of this salutary trend.

The greatest challenges lying before the system in the immediate future include: incorporating technology into the IWRP process at the vocational evaluation, vocational/skills training and career planning stages; developing resources for cost effective and individualized component selection; extending the use and consideration of technology to more "non-superstar" clients; extending the benefits of technology to the previously rehabilitated and the underemployed; streamlining the state procurement process in a manner that balances client and state interests; making appropriate educational and quality of life technology accessible to the elderly and the young; using purchasing power to enforce price discipline and responsible product support among adaptive technology manufacturers, and documenting the experience of technology use in ways that will minimize duplication of effort and maximize its instructive value.

In this chapter we have enumerated a host of difficulties that people have encountered in trying to obtain equipment,

and I have suggested a large number of issues to which consumers and providers should be alert. In light of all these complexities, it must have sounded at times as if equipment were well nigh impossible to get. In fact, with attention to these issues, almost the exact opposite can increasingly be the case. Yet, the persistence of individual clients and the dedication of individual service providers can never represent the complete answer. For as we know only too well, all of us live and work within a system.

Recognizing therefore that the dissemination of technology depends in the long-run on the evolution of public policy, it is appropriate to note the expanded opportunities for consumer input into the formation of that policy which lie immediately ahead. The 1986 amendments significantly enhance the opportunity for consumer and citizen participation in the state VR planning process. They require state VR agencies to acknowledge these inputs by noting and commenting upon them. As state plans are amended, and as they are developed over the three-year resubmission cycle, the result will be that blind citizens, educators, rehabilitationists and other interested citizens will have greater opportunities than ever before to guide their VR agencies in the development of technology policies that are responsive to today's needs.

Ultimately, the new openness in the planning process which these requirements portend may represent the most important form of client protection.

Chapter III

Other Programs of State Blindness Agencies

Conceptually, the Federal Rehabilitation Act amendments of 1986 (47) seem to reflect a subtle but potentially far-reaching shift in emphasis. While the bulk of money and attention under the Rehabilitation Act continue to be directed toward "vocational" rehabilitation, there are a number of ways in which the amendments broaden the definition of VR and in which they increase the availability of other rehabilitation services that are not so strictly linked to employment.

Major examples of these include: the establishment of "supported employment"; the recognition of part-time employment as an appropriate case outcome; the inclusion of "recreational" factors among those that should be taken into account in assessment and evaluation; the enhancement of state planning processes for the provision of independent living services; and the authorization of steadily rising appropriation ceilings for federal support of Title VII independent living and elderly blind programs.

The significance of these changes for technology availability is a long-term one. At the very least, they should provide

momentum for a progressive expansion in the range of people for whom equipment will be deemed appropriate. Questions regarding the sources and scope of technology for elderly persons are likely to prove especially troublesome in the foreseeable future, but for the first time such questions are at least beginning to be seriously asked.

Because elderly persons represent a rapidly growing segment of the visually impaired population, the needs and potential for technology in this subgroup must be an area of paramount concern. It has been suggested above that VR services, including equipment, are not totally unavailable to these citizens. Use of the homemaker outcome does make the VR program available to persons who do not have specific employment goals.

While basic adjustment services such as orientation and mobility, or rehabilitation teaching are of great importance for newly blinded elderly persons, equipment should not be overlooked with this population. At least for persons under 65, some limited possibilities in this area still exist under VR auspices in many states. Where germane to achievement of the home management and personal autonomy goals of a rehabilitation program, technology may be considered legitimately and plausibly when homemaker closure is the goal of the IWRP.

Working within the guidelines applicable in each state, the case for equipment can often be made persuasively. This is because small and inexpensive devices can yield enormous benefit for quality of life and ability to participate in the community. Simple, "low-tech" devices such as enlarged telephone dials, illuminated canes, cassette tape recorders or adaptive labelers can have an impact greatly disproportionate to their moderate cost.

In the case of children too young to be eligible for VR services, the same may also be true. States may place minimum age restrictions on the availability of such services, with sixteen being the most common age. They may also assume or

insist that equipment be provided through the special education system. But, by the same token, state VR agencies are developing linkages with special education, and are establishing children's services units. A discussion of the special education system as a source of technology will be found in Chapter VII.

Fortunately for elderly persons, students, and other youth and multiply handicapped blind persons, state commissions are beginning to develop alternative resources to those limited ones available under VR. Still embryonic, these state-funded, non-VR services, coupled with federal support for independent living services to non-VR eligible individuals, may come to represent an increasingly important resource for these groups in the years to come. If this proves to be the case, and if this results in a more focused use of VR funds to facilitate employment for those VR clients who aspire to it, all client groups are likely to benefit. It is to the potential of these other programs to provide equipment that we next turn.

State Based Programs: Through their 20% matching fund contributions, states do participate financially in the VR program. The state share will in fact begin to increase after fiscal 1988. (48) But there has been little opportunity for any state initiative in the use of these funds. Beginning with the establishment of the first such state agency in 1893, the state commissions developed and operated in accordance with local conditions and needs. Once they were pressed into service to implement the federal/state VR program at the end of World War II, the diversity of commission programs and the extent of state initiative in their formulation of policy steadily declined. As vocational rehabilitation came more and more to define their work and funding, the other, often pre-existing functions of these commissions under state law fell into eclipse.

So long as the service categories and target populations delineated under the VR umbrella roughly paralleled public and professional notions of who blind people were and what they needed, there was little impetus for states to revitalize their roles or to infuse additional funds. Today, with growing recog-

nition of demographic change which the VR program cannot accommodate, we see signs of the re-emergence of program diversity at the state level. A number of states have, as others are bound to do, introduced or augmented state funding to their commissions.

Such funding is basically intended to create new program models and to extend the provision of conventional services to those elderly, young and multiply handicapped persons who do not fit within the VR framework. Needs assessment studies in a number of states (49) have pointed the way in this direction.

The existence and scope of non-VR programs should always be a matter of concern to the individual whose state commission cannot provide needed equipment under the VR rubric. Some form of technology support is likely to be included among the goods and services authorized under the non-VR program. But no less than with VR, the trick may be in figuring out how to get it.

Lacking any unifying federal mandate, the state-funded programs will vary enormously in their organizational structure, eligibility criteria, range of goods and services provided, and linkages to other service systems. Among these variables, there are a number of recurrent issues that will come up in relation to equipment.

First, failure of the authorizing state legislation or implementing regulations to specify equipment should not necessarily be regarded as preclusive. Only if equipment is expressly barred should one assume it to be unavailable. And even then, there may be questions, especially when the need is for low-tech items, what the exclusion actually means and whether it applies.

A second recurrent issue, similar to the dollar limits in the VR program, involves per capita or per case restrictions on the amount of money that may be spent for technical, low-vision or sensory aids. Where such restrictions are in force, the sums available may be quite small, sometimes as low as \$200

or \$300. So, too, may the definitions of permissible objectives in the use of equipment or nature of available equipment be unduly narrow.

In many cases, these restrictions will still leave room for instrumental, low-tech devices. In others, they will place a premium on the kind of imagination that fits one's chosen devices and one's purposes within the applicable regulations. For example, if the program distinguishes visual aids, mobility aids and communication aids, dollar limits under each of these categories may be cumulative. This would mean that you might be able to increase from \$200 to \$600 the amount available for equipment by characterizing some portion of it under each of these three rubrics. Or it may be possible to characterize one's equipment and purpose under whichever one of these or of other available categories proves most advantageous.

Where, as suggested above, the program is oriented more to services than to the provisions of goods, the absence of a specific provision regarding technology still need not preclude its availability. Low vision services are the best illustration of this. They are understood by most people to include optical aids prescription, even if the aids are not specifically included in the formal charter of the service. There is no reason why such services should not include electronic vision aids as well. In the same way, communications skills training or rehabilitation teaching can in some instances be construed to include at least simple technology necessary for the carrying-out of the skills learned.

In confronting these and other vagaries of interpretation, the absence of overarching federal regulations is a considerable advantage. It leaves the state free to decide, but it may or may not simplify decisionmaking within the ranks of the state bureaucracy.

In the non-VR programs the involvement of private agencies is likely to be substantial. Such agencies may be generic senior services organizations or they may be agencies for the blind. Their role may be that of case manager and may include the

dispensing of routine equipment. The nature and role of the private agency may have great significance for whether and what devices are available.

Depending upon the nature and general orientation of the agency involved, the kind of educational and self-advocacy work a client needs to do may be very different. If, for instance, it is a blindness agency, already familiar with adaptive technology in the VR context, one's main objective may be to convince the agency of the need and capacity for technology in the particular case. If, by contrast, the agency is primarily involved in the provision of senior citizens services, some preliminary education in the technology itself may also be required. In either case, the client may bear a heavy burden of self-education and self-advocacy, often under circumstances where a plethora of adjustment issues compete for time and psychic energy.

Another feature of the non-VR programs is that the selection of equipment may be more heavily influenced by Medicare and Medicaid than would be the case with VR. As discussed in Chapter VIII(a), these federal medical assistance programs do not ordinarily pay for sensory or visual aids. But the economics and the philosophy of these two programs do exercise an important influence here. Their influence lies in two things.

First, there is the understandable desire of the state commissions and their private agency service-providers to fit as much of their work with elderly clients as possible within Medicare parameters, so as to maximize federal financing in what they do with these clients. Second, in working with elderly people, many agencies are accustomed to conceptualizing all service needs in terms of the "medical model." In the case of equipment, this means "durable medical equipment," which is defined much too narrowly to do much good.

But even where Medicare and Medicaid cannot be used to pay for equipment, they may still contribute to its availability in one important way. If routine professional service costs can

be defrayed to any significant degree by one or the other of these programs, some portion of the allotted non-VR state funds may remain unspent. Where this budgetary slack exists, the argument for using state funds to meet rehabilitation technology needs gains some appeal. Such an argument is completely consistent with the intent of these state programs, since it proposes the use of state monies to meet those needs which federal programs do not cover.

In the search for technology funding for the non-VR client, investigation should not be limited to those funds expressly appropriated for services to blind people. State funds appropriated for generic services to elderly citizens, including any federal block grant funds appropriated by the state in connection with such work, should not be overlooked. Accessing and locating these funds may not be easy. But, especially where the blindness agency has linkages to other senior services providers, the policies and programs of these affiliated providers should be thoroughly reviewed, and all goods-purchase precedents exhaustively tracked down.

States in which the commission for the blind is part of a large social services department are the best bet for mainstream or generic funds being available for visually handicapped persons. One should inquire into the total budget authority of the parent agency, into the full scope of its programs, and indeed into the range of purposes for which funds have been appropriated to other health, social services, senior citizens or community-based providers within the state network.

It may also be possible that funds earmarked for use on behalf of visually handicapped persons will not be administered by the blindness agency. This can happen where the state decides to administer all of its independent living programs through a single state agency. The blindness agency would rarely, if ever, be the one chosen for this, but services to visually handicapped people would certainly be contemplated under the program. Once again, ferreting out the necessary

information may be both the most important and the most difficult part of the process. Agencies' annual reports, state social services plans, state independent living plans (of the sort that must now be submitted under Title VII), and a thorough investigation of the system for providing services to blind people are all valuable resources.

Information sources for the state-funded non-VR programs will vary, perhaps as widely as do the programs themselves. But with them, as with the other potentially relevant programs conducted in related service systems, a number of sources are worth consulting.

Subject to the recognition that human services personnel are not lawyers or state regulators, whatever agencies one is working with represent the best starting point. Where their answers are uninformative or negative, the state law or governor's executive order setting up the non-VR program should be searched out. Accessible in a law library, from the governor's office, through senior citizen advocacy and self-help groups or from other sources, these documents will prove interesting reading. And with reasonable diligence, they need not be intimidating or incomprehensible.

These sources should indicate the purposes and other relevant features of the non-VR program. They should also clarify uncertainties about jurisdiction, and, most important, they should make clear what agency has responsibility for issuing further regulations and what linkages, definitions or other matters such regulations should cover.

It then becomes possible to follow-up and to engage in a process of networking that can lead somewhere. Within the limits of good disposition and courtesy, it is appropriate to approach this investigation on the theory that, until and unless proof emerges that the technology you need is barred from provision under the particular program, a realistic possibility is worthy of pursuit. Of course, agency cooperation and support are very helpful.

In reviewing the official sources of the non-VR and related programs, the state budget, as enacted by the legislature and as proposed by the governor's office, should also be consulted. Again, this kind of a source is examined less for a literal answer than to deepen understanding of the thrust of potentially applicable state programs and to identify networking opportunities. For example, if the state budget shows that senior citizens funding has been allocated to three state agencies, you know that at least these three will need to be contacted.

Ideally, the state commission will have a non-VR manual, similar in scope and purpose to its VR services guidelines. Where it does not, or where it is not readily available for inspection by clients, some or all of the regulations implementing the program may be published in a codification of the administrative regulations of all state agencies.

Beyond these documentary resources and the public and private agencies mentioned above, other possible sources of guidance and information include: independent living centers; state disability agencies or governor's advisory bodies; local government disability services offices; state or local departments of aging, or other clients who have obtained services under the non-VR program. In some states the CAP's (discussed in Chapter II [e]) may also have a role or at least may be able to provide some guidance or basic information.

As the need for networking suggests, more public and private agencies are likely to be involved in the provision of non-VR services than in administration of the VR program. This is in part because of the greater overlap between services to the elderly in general and emerging services to the elderly blind population. But overlap means that gaps will exist in the system, and with them a certain amount of buck-passing as well as genuine jurisdictional confusion. Overlap also means that some services will be duplicated while others will fall through the cracks. New programs will face many issues, including technology, only as they are confronted. In such

circumstances, effective case management and disability-specific education become all the more important.

Above all, the elderly client has the right to be taken seriously, to be given adequate explanations, and not to be brushed off or patronized. Older visually impaired people must overcome, not one, but two stereotypes in their dealings with "the system." And the system may be more complex than is the case in other service settings. But the potential of technology to enhance the quality of life for these citizens is so great and so little tapped that the effort, and even the more than occasional frustration, are well worth it. For a time, it will fall to each individual to blaze and mark new paths through the labyrinths of bureaucracy. Fortunately, this imperative, which will continue to exist while the parameters of non-VR are being marked out, places a premium on mental agility, interpersonal skills and life experience, all of which are qualities to which the advance of years poses no barriers.

A final word must be said about program eligibility. Unless an individual is eligible for non-VR services, the issue of equipment cannot be reached. Eligibility criteria may include age limitations. When such age limitations apply, they are usually intended to exclude persons of working age from the non-VR program. Such restrictions, such as those barring non-VR services to persons aged twenty to fifty, may work a hardship on the multiply handicapped blind individual who has been denied services under the VR program. Someone faced with such a "Catch-22" should always inquire into whether such a restriction is meant literally, or if its real purpose was simply to prevent the use of scarce state funds on behalf of persons for whose rehabilitation federal dollars are presumed to be available.

Little data are available on the possibilities of VR and non-VR funds to be used jointly in commissions' work with individual clients. With federal independent living funds the possibilities for such pooling of resources are good. Whether this can be done by coordinating Title I rehabilitation engi-

neering funds with state non-VR monies is not yet clear. This will depend on both the regulations that will implement rehab engineering and the structure of each state's program.

Widespread pooling of VR and non-VR resources seems unlikely to occur on any large scale in the near future, because the two programs aim at meeting different needs of separate client groups. This does not mean that a client who receives VR services but is then found ineligible or inappropriate for others may never qualify for the additional support under non-VR, however. This possibility could be useful in cases of people whose VR cases are closed unsuccessfully, but who have real equipment needs which non-VR could meet. It is a possibility that should be explored, where such circumstances exist.

Chapter IV

The Social Security Administration

Programs administered by the Social Security Administration (SSA) under the Federal Social Security Act (50) represent the largest source of cash payments, known as transfer payments, by the federal government to citizens of this country. Major transfer payment programs administered by SSA include Old-Age and Survivors Insurance, Aid to Families with Dependent Children, and, of particular relevance to many blind and visually impaired people, Social Security Disability Insurance and Supplemental Security Income. In addition, such programs as Medicare and Medicaid, while not administered by SSA, are authorized by the Social Security Act.

The work disincentives built into the Social Security transfer payment programs are well-known. But countervailing provisions of the law that allow for the use of these cash payments for purchase of work-related equipment remain virtually unknown among service providers and consumers. It is possible under current law to enter or maintain employment with little or no curtailment of benefits, if the payments that would otherwise have been forfeited due to increased income

are used to obtain job-related equipment or to meet other work-related costs.

Unlike VR, the applicability of these provisions does not depend in any significant degree on the exercise of discretion by government officials. In the aggregate, these provisions may represent the most underutilized source of public funding for adaptive technology that exists today.

(a) Social Security Disability Insurance

Social Security Disability Insurance (SSDI), or SSA as it is sometimes called, operates under Title II of the Social Security Act. (51) Major implementing regulations include those published by SSA (52) and those contained in SSA's instructions to its staff. (53)

SSDI is a social insurance program. That is, eligibility is not predicated upon one's income or poverty. Rather, eligibility hinges on three things: being "blind" or "disabled," (54) being unable to work by reason of the disability, and having insured status under the program.

With respect to insured status, the major group of covered individuals are former wage earners who paid into the Social Security system while employed. Disabled children and surviving spouses of covered workers are also eligible.

Among federal programs relevant to the equipment aspirations of blind people, SSDI is the most uniform from state to state. Although state agencies may retain responsibility for determining who is blind or disabled, material administrative features of the program, as well as benefit levels, will not vary by state. In the use of the program to leverage equipment funding, one must be alert to differences in practice and approach among SSA offices, but one need not ordinarily be concerned with any state-based legal or local considerations.

Although the program is Social Security "Disability" Insurance, there is a recurrent ambiguity in the use of the term "Disability." This is because there are important differences between the way the "Disability" Insurance program treats "blind" and the way it treats "disabled" beneficiaries.

Sometimes when the term "disability" is used, the program itself is being referred to. Other times the term "disability" is used in contrast to "blindness." People may be eligible for "Disability Insurance" "by reason of disability" or "by reason of blindness." The differences in legal treatment of the two groups are important, and will be highlighted as we proceed.

We have noted that SSDI eligibility does not depend on being poor. But this does not mean that income is irrelevant. On the contrary, an individual's earnings level is the single most important nonmedical factor used by SSA in determining whether the individual is able to work, or, as the statute puts it, whether the individual is capable of engaging in "substantial gainful activity" (SGA). (55) It is to this concept of SGA, underpinning as it does SSA's determination of whether the disability prevents an individual from working, that we turn first.

Substantial Gainful Activity: The ability of an applicant or recipient to perform substantial gainful activity (SGA) lies at the heart of the SSDI system. In a sense, ability to perform SGA is even more important than medical or diagnostic factors, since a person could be disabled by any conceivable medical standard, yet be ineligible for benefits if employment were deemed possible or had not been disrupted.

For "disabled" Disability Insurance beneficiaries the law provides that anyone who is capable of engaging in SGA will be denied benefits. Such a capacity can be found to exist, even where the disabled individual is not working. The existence of a medically verifiable condition of sufficient severity, the relationship of that condition to employment, the possibilities of employment in lines of work different from those formerly pursued by the individual, and the question of whether the individual is in fact engaging in any work are among the factors taken into consideration by SSA in evaluating these cases. (56)

As can readily be understood, this definition involves several levels of assessment, both objective and subjective in nature. The medical findings concerning disabling conditions or impairments may be fairly straightforward, but the determina-

tion whether they preclude SGA is a more subjective, and often in recent years, a more political one. From the standpoint of the category of illness or impairment involved, and from the standpoint of the individual, SSA must make determinations that are only in part medical.

For blindness claimants and recipients (those "disabled by reason of blindness") the situation is far different, the rules much simpler. "Statutory blindness," as defined in the law, (57) is established by medical examination only, with no further functional assessment being necessary. If an examination conducted by a physician "skilled in the diseases of the eye" or "by an optometrist" indicates that visual acuity and/or visual field fall within the legal parameters, SSA will conduct no further assessment of whether the lack of vision constitutes a functional barrier to employment in the individual case. By law, it is presumed to do so.

As a result, not capacity to work but actual earnings from work, becomes the key factor. Once statutory blindness is established in a covered worker, actual earnings become the principal determinant of ability to engage in SGA. Among disabled SSDI recipients, actual earnings are an important element in determining whether services performed amount to or demonstrate capacity for SGA. (58) But among blind recipients, they are the sole factor considered.

The current SGA amount for "disabled" Disability Insurance recipients is \$500 per month. This means that a disabled recipient whose average monthly earnings from employment or self-employment exceed \$500 per month will ordinarily be assumed to be engaging in, or to be capable of engaging in, SGA. (59) By contrast, the SGA amount for blind recipients is \$680 per month in 1987, up from \$650 in 1986 and \$610 in 1985. (60)

Seriously visually impaired persons who do not meet the criteria for statutory blindness are ordinarily classified as "disabled" rather than "blind." They will be entitled only to the \$300 average monthly exclusion. For purposes of this and

other distinctions in the law, they are treated as "disabled" even though impaired vision is the basis for their entitlement.

There is at least one situation in which SSA will look beneath the income of a blind SSDI recipient to determine that income of less than the average monthly SGA amount nevertheless may demonstrate capacity to engage in SGA. This is the case of a recipient who is in a position to manipulate hours worked or earnings. (61)

We care about SGA for several reasons. Those whose earnings exceed it will likely lose their SSDI eligibility and benefits. Of equal importance for the individual who needs adaptive equipment is the fact that, so long as one is not performing SGA, work yielding lesser remuneration will not jeopardize SSDI benefits. For the blind recipient whose income from employment or whose net earnings from self-employment fall below the \$680 per month SGA figure, it thus becomes possible to work without loss of benefits, and to divert some or all of one's income to the acquisition of equipment necessary to stabilize or enhance employment.

On the basis of a forty hour work week, spread over the average of 21 work days per month, this would mean that a person could earn up to \$4.04 per hour before reaching the \$680 income level. With the SSDI payment to supplement an entry level wage, the combination of these income sources may offer important leverage in the purchase of equipment for job performance and upward mobility.

The SGA figure is especially important because of its all-or-nothing nature. As a payment designed to replace wages for those who cannot work, benefits are not subject to a slow or pro rata reduction as earnings rise. Once earnings reach the SGA level, benefits will cease, ordinarily within three months. (62) Unlike the means-tested SSI program, there is no proportional reduction in benefits as income rises above the Federal Benefit Rate. The loss will be sudden and dramatic.

But there are important provisions in the law that allow blind and disabled SSDI beneficiaries to earn amounts greater

than their respective SGA figures without forfeiting their benefits. Where expensive equipment is required for work, or where the wages earned for the work exceed the SGA level, knowledge of these options can offer valuable leverage to the recipient.

To understand how this works it is important to emphasize that, when we speak of earnings, we do not necessarily mean all earnings. We mean only those earnings that are "countable" for SGA purposes. To the degree that some income can be excluded from this computation, one's gross income may exceed the SGA level without adverse consequences.

Impairment-Related Work Expenses: The impairment-related work expense (IRWE) is by far the most important of these vehicles. (63) When an individual incurs IRWE's in order to hold or function effectively in a job, the amount of these expenses can be excluded from consideration in determining countable income. In determining whether an SSDI recipient has performed SGA, it is a net figure (gross earnings from employment less ^{IRWE's} IRWE's) that is at issue.

The IRWE concept is most easily grasped by analogy to the income tax system. Under the tax laws, money that is part of our gross income may become nontaxable, either because it emanates from a tax exempt source (such as municipal bonds) or because it is expended for a tax deductible purpose (such as home mortgage interest). In our discussion of the SSI program in Section (b) of this chapter, we will encounter several examples of income items that are exempt from countability at their source. For SSDI, where the issue is earnings rather than total income, and where earnings are never exempt at their source, the IRWE should be thought of in much the same terms as a tax deductible expenditure would be.

IRWE's were added to the law by the Social Security Amendments of 1980, (64) primarily as a means for facilitating return to work by allowing SSDI recipients to avail themselves of the growing array of medical and other rehabilitation technology and services. Although blind SSDI beneficiaries

were not a focus of attention in connection with this innovation, the IRWE provisions apply alike to blind as to disabled recipients. Among the expense items eligible for deductibility as IRWE's there are a number that have particular relevance to the equipment needs surrounding the acquisition or retention of employment by blind and visually impaired people.

As delineated in the federal regulations, IRWE's include: attendant care services necessary for the performance of work-related functions; medical and prosthetic devices; equipment required for employment; other goods and services directly related to the impairment, and the installation, maintenance and repair costs attributable to deductible items. (65)

The regulations further define and illustrate each of these categories. For example, among the work-related functions for which attendant care services may be used, "assistance in reading" is included. In the company of wheelchairs and crutches, canes are also listed as an example of deductible medical devices.

While the drafters were not thinking of blind people when framing these examples, there are other cases in which they were. Thus, "the purchase and upkeep of a guidedog" is included as a deductible IRWE under the residual "other goods and services" category.

Among the examples of equipment set forth in the regulations, "vision aids," "sensory aids for the blind," and "tools specifically designed to accommodate a person's impairment" are listed. Most, if not all, of the devices and systems that blind or visually impaired people will need for work will fall within either this equipment language of paragraph (c 4) or within the residual language under paragraph (c 6).

Generally, adaptive sensory aids technology will not come within the definition of medical devices. But in view of the ample opportunities that exist for their deductibility under the other IRWE categories, this should rarely matter very much. This is just as well, for it allows the prospective user to retain

control of the selection process, while still free to seek the best advice and guidance.

Overarching all six of the deductible expense categories are certain logical concepts relating to the nature of the item and its relationship to the performance of work activity. This conceptual framework is evidenced by the fact that "nonmedical devices and appliances," though not generally deductible, can qualify for this treatment if they are "essential." Essential here means that their unavailability would have an "immediate adverse impact on one's ability to function in work activity." (66)

Understanding this principle may prove of importance in securing deductibility for systems based around standard or mainstream computer equipment, and for off-the-shelf software. In the case of a device specifically designed for use by blind or visually impaired persons, such as a paperless braille or CCTV magnifier, SSA is unlikely to have much difficulty understanding its functional role, work-relatedness or practical necessity. But with standard components, impairment-relatedness may be more difficult to communicate. In such cases, emphasis on the "immediate adverse impact" concept, and on the explanation of why the equipment is a sine qua non for performance of the job, may prove helpful. There is no indication in the regulations that such "impact" need amount to job loss or withdrawal of the offer of employment.

As the example of guidedogs suggests, an item need not be used solely for work in order to be deductible as an IRWE. It need only be of a nature as to be necessary for your performance of the work. In the case of a guidedog, that necessity is its role in the user's transportation to and from work.

The examples furnished by the regulations in connection with transportation expenses may be useful in clarifying the scope of impairment-relatedness. Ordinarily, the costs of mass transit fare or of driving one's automobile to and from work will not be deductible, since every worker, disabled or not, must get to work by one of these means. Such costs certainly qualify as work expenses but they are not impairment-related.

By contrast, the costs of adaptations to make a vehicle usable by a handicapped person, or the costs of a driver necessitated by one's disability would be deductible.

As this relates to blind SSDI recipients, it means that only those transportation costs over and above what other workers would incur will be deductible. If there is no mass transit in the area, the cost of a taxi or of car pooling, necessitated by one's inability to drive, would be an example. Where poor mobility skills preclude use of mass transit, resultant transportation costs should qualify as well.

To be deductible as an IRWE, an item must also "not be unreasonable" in cost. (67) Various methods are prescribed for SSA's determination of reasonableness. The primary method is to compare the cost indicated by the recipient with the prevailing charge under Medicare. Since there will ordinarily be no Medicare rate schedule to consult for the equipment that blind people need, a fallback procedure must be used. In cases where there is no Medicare price established, SSA personnel are authorized to make inquiries in the community, including the querying of a VR agency, which is presumed to have expertise on the subject. (68)

If a question of reasonableness arises, it will ordinarily relate to whether the best price for the item in question has been obtained. Also conceivable but far less likely are questions addressed to one's choice of components. Questions of this latter sort could be anticipated in situations where, for example, one had purchased a paperless braille for use essentially as a computer at a price three to five times that of a mainstream device. Such questions would be inappropriate, but should they be asked, one's functional reasons for needing a system of this sort should suffice to resolve them.

In the case of the more typical comparative pricing question, one should be prepared to indicate the comparative shopping one has done, or to indicate the sole-source nature of the item, as the case may be. Armed with such justification, a finding of unreasonable cost would be extremely improbable.

In the unlikely event that such a finding were to be made and upheld on appeal, it should still be possible to secure partial deductibility for that portion of the costs that are not deemed excessive.

Another requirement for IRWE deductibility is that third-party funding or reimbursement must not be available for the cost of the item. (69) This reflects the notion that the cost must be one which is incurred by the worker. As with impairment-relatedness, work necessity and cost reasonableness, this will rarely become an issue. The beneficiary's statement that outside support for the purchase is not forthcoming will ordinarily be enough. But there is one foreseeable situation in which this requirement may prove an indirect source of difficulty or delay.

Depending on the relationship between SSA and the VR agency in the local community, some SSA staff may be inclined to confirm lack of VR support with the blindness agency. In doing so, they are likely to be motivated less by distrust of the beneficiary than by sheer incredulity. The problem this poses is simple. If the VR agency is still evaluating the request, or if the recommendation for equipment is rattling around in the state procurement system, VR personnel may still believe that third-party funding is available, even though such availability has no meaning from the standpoint of the client's immediate practical needs.

The problem is one that may require some delicacy in the management and coordination of one's bureaucracies. Faced with long waits and uncertainty in their efforts to obtain needed devices through the VR system, those clients whose need is more immediate than that system can meet will often look to SSA as a secondary source. If they do this, they will not necessarily inform their VR counselors of it, since they would not wish the state Commission to cease its efforts until the alternate route had yielded success. However regrettable such lack of candor may be, its pragmatic basis is eminently understandable. For the vocational rehabilitant who needs equip-

ment quickly in order to start a job, unpredictable delays in VR procurement may be tantamount to denial of the equipment request. But from the VR agency's standpoint, when SSA calls, third-party funding is still available.

As indicated above, this problem will rarely be confronted, because the SSDI beneficiary's statements regarding the unavailability of third-party funding should ordinarily be enough. But if further contact with the VR agency is contemplated by SSA personnel, effort should be made to direct the inquiry to someone at the VR agency who can be alerted to the situation.

VR agencies will ordinarily be supportive of efforts by their clients to obtain equipment from other sources. In fully apprising them of what one is doing, there is a risk that they will cease their own procurement efforts as a consequence. But sometimes this risk has to be taken, especially if the alternative is that SSA may be erroneously led to believe that a viable prospect for third-party funding exists. Moreover, if anyone at the VR agency is knowledgeable about SSA, the value of good advice may outweigh and temper the risk that VR procurement efforts will be undermined.

The best proof of payment is a complete set of bills and receipts. Inasmuch as SSA has the right to verify all information given to it on any subject, maintenance of complete records makes good sense for a number of reasons. Again, a request for proof of payment may never be made. If one is, the better practice is to retain photocopies of all documents submitted.

Where an item is deductible as an IRWE, the costs of installing, maintaining and repairing it are deductible as well. (70) Unfortunately, no such provision is made in the law for the costs of training. In those cases where installation and on-site training overlap, it may not always be clear where the line between them is to be drawn.

Equipment installation or maintenance costs, like readers fees, are examples of service purchases that are deductible from income as IRWE's. To the degree that such costs are

likely to come up in relation to equipment acquisition and use, neither their extent nor their deductibility should be overlooked.

By and large, the deductibility of both goods and services are governed by the same rules. Where some important distinctions do come into play is on the question of timing. Generally, IRWE's are deductible in the month when they are incurred, and as deductions from the income earned in that month. But there is more flexibility in the timing of deductions for equipment or other goods than in the case of expenditures for services.

In order for a payment made for services or for someone else's labor to be deductible, the service must both have been received and paid for during the month in which the income against which it is to be offset was earned. (71) This means that services received in April must have been paid for in April and can be deducted only against April's earnings. Equipment costs are also deductible in the month incurred, but in the case of downpayments or of installment payments made prior to starting work, equipment costs can also be spread over a number of months.

With "nonrecurring" expenditures such as downpayments, the SSDI recipient has a choice. The cost can either be allocated entirely to the month in which it was paid, or it can be spread uniformly over twelve months, beginning with the month it was paid, whichever the individual selects. (72) So, if the beneficiary elects the twelve month allocation, this would mean that a \$1,200 downpayment will be reflected in an IRWE deduction of \$100 per month. Of course, any monthly installment payments or other "recurring" payments during these twelve months will also be deductible, as incurred.

But there is one situation in which the full twelve month allocation period may not be available for the downpayment. If the installment payments for the item will be completed in less than twelve months, SSA has the right to limit the forward allocation of the downpayment to that number of months in

which further payments on the equipment will be due. (73) So if installment payments were going to be due for only ten months, this means that our hypothetical \$1,200 downpayment might be allocable only over these ten. This would result in an increase in our monthly IRWE for the downpayment to \$120, but the number of months in which the downpayment was available to help reduce income below the SGA level would be fewer.

There is no limit on the length of one's installment obligations. If an individual has any flexibility in purchasing arrangements, there will be situations in which a relatively large IRWE over fewer months would be better, and there will be situations in which a smaller deduction spread over as long a time as possible would make the most sense. Various factors will determine the choice. These include: the amount of money you need to deduct in order to stay below SGA, the monthly cash flow you will need to meet other nondeductible costs, the likelihood that the job will last long enough to absorb the entire cost of the equipment, the possibility that further equipment might be needed down the line which could only be paid for if SSDI were still being received, your sense of urgency or indifference about debt, and a host of other factors.

For persons starting work in fairly secure, entry level civil service positions, the strategy of the longest possible payment period often makes most sense. Provided that the IRWE's are sufficient to bring countable income below SGA, this approach maximizes cash flow and preserves SSDI for the longest possible period. The resources of savings and income derived from this approach can contribute to meeting equipment needs associated with upward mobility, when appropriate competitive examinations or other promotional opportunities come along.

When it comes to equipment costs incurred prior to the commencement of work, IRWE deductions can still be available. Since there are no limitations on the savings that an SSDI recipient can accumulate, an individual may be in a position to obtain necessary equipment in anticipation of starting work.

But if IRWE treatment were not available for these commitments, the risks of doing so might be too great to bear.

To encourage people to make such payments, the law provides that IRWE equipment costs incurred during the eleven months preceding the commencement of employment may also be allocated forward over twelve months. (74) This is almost identical to the provision for downpayments discussed above. In fact, the payment made in anticipation of employment may very often be the downpayment. But if the downpayment or installment payments are made during the eleven months before work begins, rather than once you are already working, there are a couple of wrinkles that need to be watched.

The first wrinkle is that if installment payments are made on an item during the eleven months preceding employment, the forward allocation on all these payments will run from the first month in which any payment was made for the item. Let's say you are going to purchase a \$3,000 closed-circuit TV magnifier for work starting in December. You make a downpayment in the eleventh month previous (January) of \$200, and then make a \$200 installment payment in each month thereafter. By the time you start work in December, you have paid \$2,200 (each of the eleven months of January through November at \$200 a month). But the allocation period for that entire pre-employment payment runs from January, meaning that ten of your twelve months are used up without having thrown off any income against which the IRWE could be offset. You are left with only one month's worth of deduction (one-twelfth of your pre-employment cost) which can be claimed. You have only December remaining to you as a month in which you earned income which could be sheltered from countability.

If you had bought the CCTV on the same terms starting in June, you would have more of your months left, so you would be able to recapture a much larger proportion of your smaller pre-employment costs. You would have paid out \$1,200 before starting work (that is, \$200 downpayment and \$200 monthly installments during July through November) and you would

be able to deduct that \$1,200 over the six months remaining to you (December start date through the following May) after starting work. Of course, the installment payments that you made after starting work will be fully deductible, for as long as you make them.

Ideally, one would try to time purchases made in anticipation of employment so as to balance the need for lead-time with the objective of capturing as much of the deduction as possible. As a practical matter, the job offer and the proposed start date will infrequently be so far apart as to allow for too long a lead-time. Deferring the whole anticipatory payment to the first month of employment would make little sense in most cases, because it is likely to result in a much larger deduction for that one month than you could possibly need, while leaving subsequent months uncovered.

There are times when the IRWE mechanism can lead an SSDI recipient to choose more, rather than less expensive equipment. If there is a minimal configuration that will meet the need, one might ordinarily select it. But if the payments for it will not result in a large enough monthly deduction, its purchase may prove impossible. Subject to good faith, it may be wise in such cases to consider a more complete system, a system that will yield deductible monthly costs of the required level.

The terms of purchase that are available will also play a role in such decisions. If one can obtain better payment terms for a larger system, this advantage may offset its greater cost. Better terms here do not relate solely to the rate of interest, the amount of the downpayment or other conventional variables. When taking Social Security transfer payments into consideration, better terms also means that schedule of payments which allows you to maximize the value of the subsidy, and which contributes most to ensuring employment success.

These decisions are often complicated. They require a careful balancing of the devices needed, the costs and terms of their availability, the amount of monthly expenses required to

maintain benefits, and the length of time over which SSDI must be retained in order to assure adequate adjustment and stabilization in the job.

Another issue that must be considered is the timing of one's IRWE request to SSA and the way that request is made. In the case of IRWE's, as in all dealings with SSA, the decisions which the agency must make are not discretionary. This does not mean that SSA officials do not have the right to question what you say or to demand additional evidence. It does mean that once certain facts are established by the information and documentation the law requires, agency decisions will not be subject to any additional considerations. SSA cannot refuse to grant your ~~IRWE~~^{IRWE} request because a claims representative believes that working is not in your best interests or that you should have made a different career choice.

In this sense, SSA is more predictable and easier to deal with than VR. But in other senses, this very impersonality and the seemingly mechanical nature of the process can cause problems. For example, SSA staff members are authorized to take the recipient's word for certain things, but must obtain specified additional documentation for others, even where they completely believe what the claimant has told them.

Among SSA's array of numbered forms, the regulations do not appear to specify a particular one for use in requesting IRWE treatment of one's expenses. There are several standard reporting forms and worksheets which SSA personnel will use to document wages and to complete the necessary computations. Receipts for purchases may also be required, but there is likely to be some variation in the methods used by different SSA personnel for verifying the payment terms that apply to those purchases.

The law does not indicate when IRWE requests should be made. Since the claimant cannot forecast how much time will be required for their review and approval, it makes sense to file the request as early as possible. The bottomline of this timing is the date by which it is necessary to have a decision, particu-

larly if IRWE approval means the difference between getting the equipment or being unable to do so. Nevertheless, an advance request may be difficult to formulate. The recipient may not know precisely what the salary will be, may not have a specific job title or set of duties to which to tie the request, and, if purchasing in anticipation of employment, may not yet have nailed down a job at all. In such cases, the request might be premature, in the sense that the recipient might be unable to furnish SSA with sufficient information to make a decision.

What can result is a situation where an individual needs approval in order to make the necessary financial commitments, but does not yet have sufficient information to facilitate SSA's review. In such a case, SSA should probably be approached informally. The situation should be explained and guidance in its solution requested. Based on your explanation of the circumstances, it may be possible to derive sufficient confidence to go ahead.

One should not assume that SSA staff will be entirely conversant with the IRWE provisions, or that they will apply them in a uniform manner. Dialogue with the office from the point when the request is initiated can therefore prove especially useful. Local variations in the way such requests are handled, estimates of likely processing time, indications of what additional documentation may be required and other relevant points can be pursued and dealt with in this way.

Telling SSA that one wants and expects to work will not bring down any recriminations upon the recipient's head. Many recipients fear that disclosure of their intentions might imperil their benefits before they are in a position to safely relinquish the transfer payment support. Here, as elsewhere, full disclosure is, in the end, the only viable course.

In connection with some IRWE's, special requirements must be met before they can be approved. One unusual requirement applies if the paid services of a family member are being claimed. In such a case, documentation of economic loss suffered by the family member as a result of choosing to work

for the SSDI recipient must be provided. (75) Ordinarily, a statement from the family member, explaining what other work was foregone or providing other information, will be required, but there is no certainty at exactly what point in the review process the need for it will surface.

Establishment and maintenance of contact over the request are valuable for a number of other reasons as well. Primary among these is the possibility that a request which is incomplete or lacking in supporting documentation will be denied. By following up on one's request, this possibility can be reduced. But denial, as such, should not necessarily be a ground for despair.

Where denial occurs, it is as likely that this will be due to lack of the necessary documentation as that it results from disapproval on the merits or from disbelief of the pertinent facts. Notices accompanying denials may or may not make these distinctions clear. Renewal of the request is possible, and may suffice to favorably resolve the matter, especially if it allows for the provision of additional information, for the clarification of key facts, or for the unearthing of any misunderstandings that may have crept in.

When it comes to the basic paperwork, it is best to begin by asking the SSA office what procedures they recommend. Some offices or personnel may wish to complete the agency's part of the paperwork at an office interview, while others may prefer to use your written submission as the basis. Some may wish to fill in the forms themselves, during or based upon a face-to-face conference/meeting. Others will prefer a written request from the recipient, with any meeting to be held only after verification has taken place. It is best to ask. In this way, by asking at the outset, one can help to assist the smooth processing of the request, and also get more general feedback from the way the inquiry itself is answered. If the response to your inquiries about the procedure to be used reflect uncertainty or ignorance about the IRWE concept, you will be alerted to a potential source of difficulty.

Making such preliminary inquiries will also help you to plan your followup. As in so many cases, striking a balance between patience and persistence is important. You don't want to call back too often, but you do not want to let the matter slip either. By asking for estimates on timeframes, by checking to make certain that your documents have been received, by asking when you would be well-advised to call back, and by understanding that SSA operates along several parallel but independent administrative tracks, one can keep tabs on one's request without becoming a nuisance.

Once your IRWE request is approved, that is not the end of the matter. Normally, SSA claims representatives are instructed to "diary" such allowances for twelve month review. (76) Short of the twelve months, or if the deductions are scheduled to be completed in a shorter time, a number of important events can also take place. Among these are the continued accumulation of receipts for installment payments made during the year. These may or may not be requested by SSA. Additionally, it may become necessary to modify one's equipment plans, as the day to day experience of work yields new needs.

Inclusion of new or additional IRWE equipment is not precluded by the specific dollar amounts or list of items embodied in one's original request. In fact, SSA does not require that the actual amounts expended conform to the penny with those forecast when the request was originally approved. But if the amounts change, SSA may need to be notified so that necessary adjustments can be made.

An SSDI beneficiary's entitlement to IRWE deductions will end once necessary goods and services have been paid for. One may have a variety of long-term costs, such as readers, routine equipment maintenance or incidental software, but if these are not sufficient in amount or regular enough to bring average monthly income below the SGA level, the IRWE mechanism cannot be used to subsidize them. This same problem can sometimes be encountered right at the start of employment,

either because the wages are too high to generate enough deductions or because they are too low to warrant the use of IRWE's.

At the time of starting employment, there may also be situations where one faces heavy financial burdens of a non-IRWE character. This would include persons with student loans to repay, persons with other debt to repay, or persons who must incur child-care or other family-related costs in order to work. In these and other cases, it is good to know that IRWE's are not the only strategy for retaining the SSDI funds needed to obtain equipment.

The Trial Work Period: The trial work period (TWP) or period of trial work as it is also called, represents another method by which a blind or disabled SSDI recipient can work for up to nine months, without loss of benefits and without regard to income. (77) The TWP came into the law as a means of getting people back to work. It was used in those cases where the capacity of the recipient to work needed to be tested before a decision on the question of disability could be definitely made. It was available in those situations where the capacity to engage in SGA is thought to exist but requires what might be called experimental evaluation.

During the nine month period allotted for this purpose the recipient can work, while continuing to receive benefits, and without regard to the wage levels earned. At the conclusion of the nine months SSA will evaluate ability to work. If the finding is affirmative, it will result in cessation of benefits, usually after an additional two months.

For the blind recipient who is still working after nine months, but whose earnings do not rise to the level of SGA, continued work will not, of course, jeopardize benefits. This is also true for the disabled SSDI recipient, subject to the much lower SGA figure that would apply.

If the TWP is available, and if the nine months represents a sufficient length of time to pay for necessary technology, it becomes the strategy of choice. With it, one's monthly income is

not an issue, one does not need to submit receipts for purchases and SSA has no interest in how one's funds are spent.

An individual's nine months of trial work need not be consecutive, but they are cumulative. For each period of disability a recipient is entitled to only nine such months. Without contacting SSA, it would be unwise to assume that one can automatically begin working under a TWP, however.

In a very technical sense the availability of a TWP is discretionary with SSA. Strictly speaking, SSA is required to authorize it only when there is an issue of capacity to work which can be tested in this way. Nowadays, this discretion is almost never invoked, and the TWP is granted routinely, if the individual is otherwise eligible for it.

The key issue in such eligibility relates to how many of the potential nine months have already been used up. SSDI recipients are not necessarily notified when months of trial work have been charged to their records. They can learn to their dismay that some or all of the months they thought were available have already been used up. It can happen unsuspectingly to recent graduates who worked during the summer while still in school, to persons who made previous unsuccessful efforts to return to work, even to persons who were earning wages far below the SGA level. If the individual has been an SSDI recipient for some time, it could have happened several years ago. Thus, in order to avoid an unpleasant shock, one needs to ascertain how many of the nine months remain available. If they are not enough to pay for the needed equipment, the IRWE or some other procedure must be resorted to.

When an SSDI recipient enters employment without knowing exactly what equipment will be needed, the TWP can permit accumulation of funds for later purchases. Such would not be possible with IRWE's, where the money cannot be saved but must be spent in order to get the benefit of the deduction. Even when equipment is not immediately needed, low wage and entry level workers should use the TWP to help amass re-

sources that can be used to facilitate equipment for upward mobility later on.

Older Persons: No one over the age of 65 is eligible for SSDI, but for those blind recipients between the ages of 55 and 64 a number of special rules apply. These rules serve to distinguish this group, not only from disabled recipients, but from younger blind ones as well. They are of particular relevance to the TWP.

Availability of a TWP to the blind recipient over the age of 55 will depend upon the circumstances under which the individual's last employment was terminated and upon the nature of the work being returned to. The TWP will only be available in limited circumstances. These include situations where the individual is returning to work requiring "comparable skills and abilities" to work engaged in with regularity before reaching age 55, or to work which the individual did before becoming blind, whichever was later. (78) It will also be available where the work being undertaken requires the acquisition of new skills or other significant vocational adjustment. An older recipient who plans to make use of the TWP should therefore always discuss its availability with SSA, bearing in mind that more information may have to be furnished than would be the case among younger workers.

Among seriously visually impaired recipients over the age of 55, there can be rapid deterioration of vision with many of the most common diagnoses. For this reason, a significant number of these people may cross the line from "disability" to "blindness" between medical examinations. Such persons may find it to their advantage to obtain reclassification as soon as the medically-determined level of their vision warrants. There are a number of rules that make it easier for these older blind persons to work, without losing eligibility, than would be the case among members of their age group on the disabled side. A number of these provisions can have implications for technology acquisition.

(b) Supplemental Security Income

Established under Title XVI of the Social Security Act, (79) the SSI program provides funds to those "aged, blind and disabled" persons whose income and resources fall within its definition of need. Unlike SSDI, it is a strictly means-tested, income maintenance program, predicated upon financial need. This distinction between income maintenance and earnings replacement is central to understanding most of the differences between the SSI and SSDI programs.

Because of its restrictive income and resource standards, SSI has been regarded by many as imposing some of the most severe work disincentives of any transfer payment program. SSI is among the most complex programs to understand. But, like SSDI, it offers substantial opportunities for the use of benefits in the purchase of job-related equipment by its blind and disabled recipients. Far from being a barrier to employment in this age of technology, SSI constitutes a largely untapped reservoir of funds for use by the most economically disadvantaged blind persons for entering the mainstream of society.

As suggested above, SSI differs from the Disability Insurance program in a number of important ways. One need not be eligible for SSDI or hold insured status under that program in order to qualify for SSI. In determining ^{eligibility} ~~eligibility~~ for SSI, one's total income and resources from whatever source are taken into account, rather than only earnings.

Another important distinction is that the level of payments will not be the same from state to state. This is because each state is free to define the level of need at higher income levels than the federal government does. More than half the states do place the income eligibility ceiling at higher levels than the federal government uses. These jurisdictions provide a state supplement, sometimes paid with and sometimes paid separately from the federal benefit.

For 1987 the maximum federal SSI payment to an individual is \$340, up by 1.3% from \$336 in 1986. This means that in a state with no supplementation, a blind or disabled person with

no income could expect to receive this maximum \$340 amount. In a state with a supplement, this individual could expect to receive the same \$340 Federal Benefit Rate (FBR) plus the amount of the supplement.

The \$340 is regarded as the minimum monthly income required for subsistence. If there is income from other sources, it will result in reduction of benefits. Income can be earned or unearned, it can be in cash or in kind, and it can be "imputed" to the individual as a result of living arrangements or other factors.

Under SSI the question of eligibility and the question of benefit level are therefore not the same. Unlike the insurance program, SSI is not an all-or-nothing proposition. Also unlike SSDI, benefit levels are calculated for each individual on a monthly basis. The highly nuanced, often excruciatingly detailed monthly calculation of benefits represents one of SSA's central responsibilities in the administration of the SSI program.

In thinking about SSI as a source of funding for technology, the objective is much the same as with the DI program. The goal is to ensure that payments which would otherwise be reduced by income can be retained for use, in conjunction with that income, in meeting the equipment and related needs of employment or self-employment.

With respect to both earned and unearned income, a variety of deductions and exclusions exist. These serve to exclude income from "countability," thereby ensuring that its receipt will not reduce benefit levels or prevent eligibility. To understand how SSI payments may be retained for use in equipment acquisition, the key concept to be grasped is that of "countable income". (80) An individual's monthly benefits will be reduced by \$1 for every dollar of countable income received in that month. Yet, just as taxable income may end up as a small fraction of gross receipts, once all tax exemptions, deductions and credits have been applied, so can "countable income" turn out to be only a small proportion of total revenues. In fact, it is not

unrealistic to expect that countable income can be legitimately reduced to zero in a significant number of cases, meaning that no benefit reduction need occur.

Except where the law provides otherwise, anything that an individual receives, whether in cash or in kind, is considered to be income under the SSI program. But the law also provides a surprisingly large number of major exceptions, through which important categories and significant amounts of income may be excluded from countability.

Before reviewing these exclusions in detail, let us demonstrate how they would affect a recipient's situation. Let us suppose a blind SSI recipient receives total or gross income of \$679 in a particular month. Let us further assume that all of it is earned income (EN in SSA parlance). Had this individual been an SSDI recipient, this level of earnings would have fallen below the SGA level, so there would have been no loss of benefits. But as an SSI beneficiary, the same individual will face serious problems. The month's SSI benefit will be reduced dollar for dollar by however much of this gross income remains countable after SSA's computations are completed.

If the entire \$679 were countable the individual would receive no SSI benefit for that month. The countable income would exceed the \$340 FBR by a wide margin. Even in a state where the level of need was placed at a higher figure, this countable income would still be too high. Fortunately, the \$679 would not be entirely countable.

All SSI recipients are entitled, as a routine matter, to a general income exclusion amounting to \$85 per month. This consists of the first \$65 of earned income and the first \$20 of unearned income. (81) We reach \$85, because the \$20 unearned income credit can be applied to earned income if not otherwise used. (82) (The reverse is not true.)

Beyond this \$85, the recipient would also be entitled to exclude one-half of remaining earned income (in this case \$297). It is a misnomer to say that the recipient does the deducting, though. SSA makes all the calculations based on the informa-

tion furnished it. Next, let us suppose that the individual has \$100 of excludible "blind work expenses." Adding this we reduce countable income for the month by a further \$100. We have now excluded \$482 (\$85 plus \$297 plus \$100) leaving countable income of \$197. It is this \$197 balance of countable income that will be deducted from the SSI payment for that month.

For someone receiving the maximum \$340 per month FBR in a non-supplementation state, this would leave an SSI payment of \$143 (\$340 minus \$197) for that month. To put it another way, this would mean that the individual could receive the earnings from employment of \$679 plus \$143 in transfer payments.

Broadly speaking, income can become noncountable in either of two ways: it may be excluded from computation because it comes from an exempt source, or it may become excludible after receipt by reason of how it is spent. (83) The number of exclusions is too great for comprehensive treatment here. For those wishing to pursue them, the citations in n. 83 will provide full source material. Our discussion will emphasize those exclusions from countability that bear most directly upon the acquisition of adaptive technology by blind SSI recipients.

Exclusions: The first exclusion of interest is the general income exclusion (that is, \$65 of earned and \$20 of unearned income per month) discussed above. These sums are automatically excluded from countability. The recipient need not ask SSA to exclude them, unlike some other examples discussed below in which SSA cannot know about the excludibility unless told where the money came from, why it was received, or what it was used for.

In those cases where the unearned income exclusion has not been utilized, it can be applied to earned income. The reverse is not the case. This means that if a recipient's entire monthly income consisted of \$85, it would all be excludible if unearned income were \$20 and earned were \$65. That \$85

would continue to be excludible if the split were \$66 of earned and \$19 of unearned. But if the unearned portion of our \$85 is \$23, then \$3 will remain countable for that month. Even though we have only received \$62 of our allowable \$65 in earned income, the unused portion of that credit cannot be applied to the unearned component. Thus, in the case of the \$62 to \$23 split, we would only be able to exclude \$82 (\$62 plus \$20) of our \$85 income for that month from countability. On just such tiny nuances are many SSI calculations based.

A second and very important exclusion is "one half" of the remaining earned income. For blind persons this calculation is made after all income items which are excluded at the source have been eliminated, and after the general income credit has been applied. An interesting disparity here occurs between the treatment of blind and disabled persons. For blind persons this exclusion is implemented prior to the deduction of work expenses. For disabled recipients the "one-half the remainder" is applied last, only after all other exclusions including work expenses have been applied. (84)

This difference in the order or the priority for applying exclusions will result in different levels of countable income, even if the figures going into the computation are exactly the same. The example of our \$679 wage earner will demonstrate this. By deducting one-half the remaining earned income before excluding blind work expenses, this recipient was able to include those work expenses in the base figure, meaning that the exclusion for the one-half amounts to \$297 (one-half of the \$594 that remained after we deducted \$85 from \$679.) The \$100 blind work expense deduction is implemented next, resulting in an increase of the monthly exclusion by this further \$100 to a total of \$482 (\$85 plus \$297 plus \$100.)

The disabled recipient has to take the work expenses first, so that when it comes to calculating one-half the remainder, we're working with a figure of only \$247 (\$679 minus \$85 minus the \$100 work expense times one-half.) This leaves

countable income of \$247, as compared to the \$197 that the blind recipient had.

The importance of this divergence lies only in part in the \$50 difference. What this example illustrates is that SSI computations will yield different outcomes, depending on the order in which the steps are performed. Unless one knows exactly how a particular computation is done, knowledge of the numbers that go into it may not be sufficient to accurately predict the outcome. Small variations in computational method can have significant impact upon the situations and the planning of the recipients involved. For these reasons, one should always get one's calculations verified by SSA, wherever possible. SSI recipients whose budgeting for equipment involves narrow margins for error must make certain that their calculations are correct. Good arithmetic skill will not alone suffice to give this assurance.

Our third exclusion category brings us into contact with items that are excluded because of their source and purpose. In this context, funds received through a Projects with Industry (PWI) training program are excluded from income by statute. (85) Several organizations providing vocational training or placement to blind and disabled persons have received federal funds under the PWI program. For the blind participant in such a program, this exclusion from countability can contribute to faster accumulation of funds for equipment than might otherwise be possible.

Regrettably, no comparable exclusion is forthcoming under the much larger Federal Job Training Partnership Act (JTPA). (86) Training stipends or wages paid to JTPA participants are not excluded from income, though they may of course become excludible if utilized to meet work expenses or in the fulfillment of a Plan to Achieve Self-Support.

Although students cannot exclude the proceeds of work study or cooperative education jobs from income, our fourth exclusion category does relate specifically to the situations faced by this group. Ordinarily, the \$85 per month general in-

come exclusion amounts to \$1,020 over the course of a year. Notwithstanding this ceiling, full-time students are permitted to exclude from income up to \$1,600 of earned income per year. (87) As important, up to \$1,200 of this sum may be earned in any one quarter of the year. This allows students to work during the summer without penalty. Its role in helping to amass funds for equipment can be significant.

With the income exclusions discussed so far, SSA recognition should not ordinarily pose any great difficulties. The recipient should be alert to their full recognition in all computations, but provided the recipient has made the relevant facts clear, accurate benefit level computations can usually be expected. When it comes to items that derive their excludibility, not from their source but from the way in which they are spent, both the complexity of the procedure and the recipient's level of responsibility become considerably greater. With these Blind Work Expenses and Plan to Achieve Self-Support exclusions, the way money is expended and documented, the timing and manner of bringing one's exclusion request to SSA attention, and other factors will play a key role. It is to these fascinating yet surprisingly little appreciated exclusion categories that we next turn.

Blind Work Expenses: Blind Work Expenses (BWE) serve much the same purposes as IRWE's, but they differ significantly both from the IRWE's applicable under the SSDI program and from the version of the IRWE concept that applies to disabled recipients of SSI. (88) In general, these differences are advantageous to blind workers, allowing more and larger deductions than would otherwise be available.

BWE's lie at the heart of SSI's potential to provide equipment funding. Their understanding and effective use can have profound implications for achievement of employment and other goals.

The key to understanding the BWE is its substitution of the word "blind" for the term "impairment-related." Under the regulations all expenses "reasonably attributable to the earning of

any income" on the part of the SSI recipient "disabled by reason of blindness" are excludible from countable income as BWE's. (89) The expense need only be a work expense to qualify. It need not be impairment-related, though of course it can and, as in the case of equipment, often will be. It need not be of a sort that is unique to the blind worker, or of a type that a nonhandicapped worker would not incur. It need only be an expense reasonably incurred in order to work.

In defining the BWE concept, SSA's instructions to its staff are worth quoting: "To be deductible, an expense need only be an ordinary and necessary work expense of the blind individual." (90) The instructions then go on to enumerate, at some length, examples of such expenses, dividing them into the three categories of transportation, job performance and job improvement. Items listed under transportation to and from work are: cab or bus fare, cane travel instruction, guidedog and its upkeep, and private automobile travel (at \$0.15 a mile). (91) With the exception of private automobile use, for which a fixed rate is established, the other items would be determined on the basis of actual cost, provided it is reasonable.

The list of items under the job performance category is quite long. Of particular relevance are: equipment (including equipment for homebound work), optical aids, tools used on the job and reader. It also covers costs for: lunches, child care (if not otherwise provided), licenses, union and professional association dues, uniforms and safety shoes, and translation of materials into braille. It includes wheelchairs and other prostheses needed for work. And it includes taxes (income, FICA and self-employment) withheld from wages or earnings. (92) Making up the job improvement category are: stenotype, key-punch and computer training costs. (93)

As with other exclusions, implementation of the BWE provisions contemplates no discretionary decisions on SSA's part. Nevertheless, questions of judgment and interpretation are bound to come up, both in terms of the exact meaning of the provisions, and in terms of the factual showing and the docu-

mentation that will be required for approval of exclusion claims. Even in a system that does not rely on discretion, good faith questions can arise over what expenses are "ordinary and necessary" or what levels of expense are reasonable.

In connection with equipment, no definition is offered. In any event, the list of items is intended for illustrative purposes, with excludibility of any expense depending on its reasonable attribution to the earning of income. Accordingly, where equipment is needed and used for work-related purposes, the specific choice of components should pose no impediment to excludibility under the BWE concept. Indeed, subject only to the required documentation and explanation, there seems almost no conceivable circumstance under which technological devices used for work could be denied excludibility under these expansive provisions.

At the risk of creating needless alarm, some possible difficulties should be anticipated, however. Despite the clear purpose and broad scope of the BWE instructions, SSA offices and personnel are likely to vary in their interpretation and administration of these provisions. Although the BWE (or as it was formerly called, the Work Expenses of the Blind) concept predates IRWE's in our law, it is far less frequently invoked and perhaps somewhat obscure. Inasmuch as statutorily blind recipients comprise only about 2% of persons on the SSI rolls, it can be appreciated that many SSA officials will have little familiarity or experience with these provisions.

Beyond relative obscurity, another source of potential confusion in application of the BWE provisions must be noted. Like so many state and federal laws and regulations dealing with blindness, the BWE language exists in some isolation from the main body of SSA's instructions to its field staff. Personnel are instructed on procedures for evaluating and adjudicating BWE requests, but on many key points which are not specifically discussed, the usual cross references to other, related instructions are lacking. From the standpoint of iden-

tifying and resolving questions in a timely fashion, the BWE request review procedures are quite favorable, however.

As suggested earlier, one problem that is likely to come up arises in part from the length and specificity of SSA's list of excludible items. In the case of a list as detailed and lengthy as this, there will always be a tendency to construe it literally, so as to include only the items on it. But it should be regarded as illustrative of the categories and expenses to be covered. This is a matter of common sense. No one would seriously suggest that the mention of cab or bus fare was intended to omit subway fare, that safety shoes would be excludible but not safety goggles, or that translation of materials into braille was to be treated differently from recording identical materials on tape.

Inclusion of job improvement as one expense category is intriguing. The three examples given are obscure, probably reflecting specific requests that came up for adjudication. What is left unclear is whether the job improvement category refers to training costs associated with improving performance in the current job, or whether some notion of upward job mobility might not be contemplated. It seems likely that some notion of upward mobility, whether in terms of job categories or simply skills, can be inferred. If only job retention were at issue, there would have been little point in listing Job Performance and Job Improvement as separate categories.

Some potential for using BWE's for achieving upward mobility is suggested by the lack of any definition of equipment. So long as the devices chosen have a present, bona fide use in one's work, it should not matter that they possess some additional capabilities beyond those required for performance of current or entry level tasks. If one needs to maximize one's BWE's, and can justify the choice in good faith, consideration of a system with the capacity to meet foreseeable future, as well as immediate needs, would seem appropriate.

Based on a thorough job analysis, it should usually be possible to identify those components which will provide the fullest degree of functional parity with sighted colleagues. For

example, if sighted colleagues can use the office printer to obtain hard-copy printouts of the work they do on their microcomputers for review at home, for taking to meetings or for other purposes, then it seems reasonable that the blind worker who can utilize braille should have access to the same kind of hard-copy output. The hard-copy braille embosser need not be something which the individual would be fired for not having.

As guidedog upkeep and cane travel instruction indicate, an item need not be used solely for work in order to qualify as a BWE. Again, this logic may have some relevance to the equipment choices made. For example, if immediate access to printed documents is germane to competitive performance, even an expensive and multi-purpose device such as an optical character reader or an enlarging photocopier may be in order. It would not matter that this item could also be used for other purposes, so long as a bona fide, work-related need existed. Provided the expense is not for life maintenance, whether it is a matter of equipment or other work-related costs, exclusion should not be difficult to obtain.

Distinguishing life maintenance from work expenses, or determining what is reasonable may not always be easy. To illustrate how this can happen, as well as to reveal the human nature that intrudes upon all our rules and formal processes, it may be useful to draw on two cases, one eccentric, the other common. They graphically demonstrate how variations in individual temperament, coupled with honest disagreement, can cause difficulties.

One case involved the formulation of a BWE request that included \$1.80 per day in roundtrip subway fare to and from work. After a little while, a Social Security claims representative called me to ask the distance between the claimant's home and workplace. Correctly surmising that it was less than a mile, the official wondered whether this was a truly "necessary" expense, and why the individual could not walk to and from work. As fate would have it, the weather was inclement on the day of this call, so we won our point.

Whatever this incident may have revealed about the examiner's commitment to physical fitness, it also may have reflected some confusion between the BWE and IRWE provisions. Under IRWE the subway fare, since not impairment-related, would not have been excludible, and the point of the call had been to ask me whether there was any reason why this person could not walk.

The more common example relates to clothing. It may be that a good suit, for example, is socially indistinguishable from a uniform in white collar or corporate settings, but SSA personnel seem strongly disinclined to treat it as an excludible work expense.

The BWE is available to some persons over the age of 65. Unlike SSDI, whose recipients are converted to Old-Age and Survivor's Insurance coverage when they reach this age, SSI remains available to those "aged" recipients who meet its financial eligibility criteria. For those aged recipients who were receiving benefits through the program under the blindness category in the month before they reached age 65, the BWE continues to be available.⁽⁹⁴⁾ This can be important for older blind persons who wish to continue or return to work, but who need technological aids in order to do so successfully. In their planning these persons also have the limitations of income under the retirement program to take into account.

SSA gives its staff instructions on the timing and procedure for BWE requests. There is no requirement that advance approval be obtained.⁽⁹⁵⁾ But if a claimant incurs the expense before ascertaining its excludibility, there may be a risk of denial. The denial would not be on account of any lateness of the request. It would result from whatever problem SSA had with the request. Had the request been made before the expenditure was, this risk would have been averted. As the instruction states: "The result may be that a sizable expense is not deductible and that the individual is thereby without adequate funds for living expenses."⁽⁹⁶⁾

SSA appears to recognize that waiting too long for an answer may be just as great a risk, however. It instructs staff to provide advance approval of these work expense requests, and to process them as rapidly as possible. Pertinent language states: "It is important to an individual eligible for payment on account of blindness to know in advance whether a particular work expense is deductible. A blind applicant or recipient could not be expected to invest in work-related expenses unless he could be assured in advance that he would receive sufficient SSI benefits to pay for his basic needs. For this reason, it is necessary to give an advance notice..." (97)

It is important to note here that these provisions apply to "applicants and recipients." SSA personnel are instructed to inform employed blind persons applying for SSI of the BWE provisions. (98) If a blind person is working in a low paying job and needs equipment to keep that job, post-employment services from VR are the most obvious choice. But if this route is unavailable, the working blind person whose income would be low enough after necessary BWE's might consider applying for SSI.

BWE requests must be made in writing. The Form SSA-795 is specified for this purpose. SSA-795 is a claimant's declaration form (that is, a written statement, signed by the recipient, setting forth the facts on which the request is based). Where possible, face-to-face completion of the 795 or early discussion of the request are best, since they allow any questions or ambiguities to surface at the beginning.

The information called for on the SSA-795 includes: name, address and Social Security claim number; description of the nature, frequency and expected duration of the work to be performed; name, address and telephone number of employer; indication of whether the individual consents to the employer's being contacted, if necessary; type, timing and anticipated amount of each expense item for which a deduction will be claimed; and explanation of why those items which are not

self-explanatory are viewed as ordinary and necessary work expenses.

For the most part, equipment requests should be "self-explanatory." But this will depend on several factors, including the reviewer, the items chosen and the ways they will be used. Again, standard items may be less self-explanatory to reviewers than components designed specifically for vision impaired people, so these may require a bit more explanation.

As reviewers will differ, so will SSA offices. Offices may vary in how and whether they use this form. A recipient planning to claim BWE's would be well-advised to ask the SSA office what steps should be followed.

As indicated above, staff are instructed to notify claimants of decisions on BWE requests. Where items are disapproved, a full statement of the reasons and of the facts considered is required to be furnished. (99) One should not take a BWE denial notice too hard. If the request was well thought-out, redetermination should help. If there were several BWE's involved, the disapproval may be only as to a small part. In some ways it is actually good to get a disapproval. Certainly it is more useful than getting no definite word at all, and SSA's statement of the facts considered and reasons for the disapproval may provide the basis for setting matters straight.

SSA is currently revising all of its notice procedures under the SSI program. This is likely to help recipients better understand what they're being notified of. As important, it is likely to reduce the frustration that often results when local field staff do not have access to centrally-generated notices that come to the recipient from SSA headquarters in Baltimore. Whatever a notice does or doesn't say, the blind SSI recipient has a right to seek reconsideration or review of the denial of BWE requests. Redetermination (that is, a change in the decision) is authorized in such cases, if the facts have changed or if the original determination was erroneous. (100)

People are not required to anticipate the amount of their BWE's to the penny. As the POMS makes clear: "The actual

amount of the expense" is the amount to be excluded, "even though the amount varies and is more or less" than the amount previously mentioned. (101)

SSA has the authority to verify all BWE information. This would extend to each of the points on the SSA-795. The method of verification will vary. With some things, the claimant's statements can be accepted. With others, SSA's own record will suffice. With some others, such as wage level, employer verification on form L-4201 may be needed.

Where some documentation beyond the recipient's statements is required, the timing for requesting it may also vary. Sometimes, complete documentation may be required at the same time the BWE request is made. In other cases, verification may be conducted as part of a later review.

Those requesting BWE exclusions should maintain complete records, including bills, receipts, etc. Verification of the need for equipment, as distinguished from its cost, may or may not require confirmation by the employer. Ordinarily, the recipient's explanation of the need for equipment is sufficient, if believed. But there are occasions when the employer's input may also be sought. Form SSA-795 provides for this by asking the claimant's permission to contact the employer, if necessary. Since the employer is likely to be contacted anyway for verification of wages, there is generally little point in withholding such permission.

SSI recipients who are planning to start work would often like to obtain their equipment in advance of doing so. But obtaining BWE exclusion of expenses made in anticipation of employment may not be possible in the way it could be done with IRWE's under SSDI. With SSI, everything is done on the basis of monthly calculations. In any given month, you can only deduct what you spend, and you cannot deduct any more than you receive in income. This means that if you make BWE payments in a particular month, these can only serve to reduce your countable income for that month to zero. Anything over that which you spend is effectively lost, since it cannot be

carried forward to the next month. This means that if you make a large downpayment in a month, deductibility will only be available for that portion of the downpayment which is needed to reduce countable income to zero. If you have no countable income in the month, there can be no BWE's.

Given the importance of advance purchase, full training and proper set-up, there may be a number of people who will find it worthwhile to scrimp so that they can make a downpayment and get the equipment in time. If they are willing to forego deductibility, this is potentially doable, but even then there can be another problem. If the amounts one spends are too large, you may be running the risk of exceeding the permissible resources limit. Fortunately, though, there are ways in which resources that will be needed for equipment can be built up and excluded from countability, as well.

Plan to Achieve Self-Support: The Plan to Achieve Self-Support (PASS) (102) is the most powerful tool for excluding resources from countability, as well as for excluding the income that is necessary to buildup these resources. Properly understood, the PASS therefore represents the primary means by which SSI recipients can accumulate funds for the purchase of expensive equipment, by which they can shelter unearned income from countability, and by which they can use federal funds to defray equipment costs that are incurred before starting work. As such, the PASS may be important to several groups of equipment seekers. These include persons involved in educational or training programs that are expected to lead to self-support, persons who must have their equipment in place before starting work, and persons whose equipment costs will be greater than even the combination of wages and continued SSI payments can meet.

Some background discussion of the meaning of "resources" will provide a framework for understanding how the PASS can help. Under the SSI program, we are concerned with resources as much as we are with income. This is because SSI eligibility is conditioned on how much one has, as well as on what one

earns. But as with income, the key notion in the computation is that of "countable resources." (103) Also as with income, there are several ways in which resources may be excluded from countability.

For many years the SSI countable resources limit for an individual was \$1,500. Countable resources over this amount resulted in reduction of the SSI payment. The limit is now rising at the rate of \$100 per year. It stands at \$1,800 for 1987, and is scheduled to reach \$2,000 by 1989. Obviously, even if an SSI recipient could manage to save \$2,000, most adaptive computer systems would still require additional sums.

There are many items that are excluded from countability, however. Most household goods and personal effects used in daily life are excluded from countability, for example. Tools and equipment used in the production of income are also excluded. (104) The law distinguishes between "liquid" (that is, cash or easily convertible into cash) and "nonliquid" resources, generally granting excludibility to the nonliquid while treating the liquid as countable on the theory that cash is readily available for the recipient's use.

Thus with cash resources such as savings, few exclusions are available. The PASS is a very important one that is. When a PASS is in effect, the resources needed to achieve its objectives are excluded from countability. If one uses income to fulfill the PASS, that income, too, is excluded.

As a tool for the exclusion of income, the PASS can only be used when no other exclusions are available. (105) To put it another way, you would only think of the PASS in connection with the income that remained countable after every other exclusion had been utilized. With resources, though, it is another matter. For even if there is no countable income, the PASS can be used to build up resources through savings that would not otherwise be permissible. The PASS is one of the very few ways through which money can be saved up. When a large down-payment or full cash payment is involved this can be crucial.

There is no limit to the amounts of money that can be "accumulated and conserved" under a PASS. But no PASS can be in effect until it has been approved by SSA. This need for advance approval cannot be stressed enough. With BWE's, you can go ahead and spend the money first, taking the calculated risk that exclusion will be approved. With the PASS you cannot safely do this. A perfectly good request may be involved; the accumulation and expenditures may be of a sort that would have been approved. But if approval for the PASS has not been secured first, there can be no exclusion. A PASS must be "in effect" before anything is done under its terms, and no PASS can be in effect until it has been approved.

This restriction may sound worse than it is. PASS requests will rarely partake of the kind of urgency that other requests do. Their long-term nature is such that the request can usually be made under circumstances which allow for a reasonable SSA review time, without working undue hardship upon the recipient. But if a particular urgency does exist, one important ambiguity in the meaning of "in effect" should be borne in mind.

It appears that SSA actually does have authority to approve a PASS retroactively. Provided that no actions under the PASS occurred prior to the date on which the request specified that the PASS would begin, and provided that the request was filed prior to the PASS's scheduled commencement date, SSA's own delay in reviewing the request should not prove prejudicial to the applicant. Nevertheless, it is risky to proceed without approval, because SSA's criteria for evaluating PASS's are very tricky and unpredictable.

PASS's may be approved for an initial period of eighteen months. This will be the limit for plan approval, even if the PASS will take longer to complete. Where more time is required the PASS can be extended for an additional eighteen months, but this determination will not be made until the initial period has been completed. A second extension of twelve months, bringing the total to 48, is available in certain cases. If the

PASS will take less than eighteen months to carry-out, initial approval will be limited to this shorter period.

The request for PASS approval must be submitted in writing . SSA should be consulted as to whether a letter or a particular form is desired. Each request must set forth the details of the proposed plan. In addition to the usual name, address, Social Security claim number and purpose of request, this information must cover a number of specific details. These are: the nature of the self-support goal to be achieved (what job or profession); the educational program, vocational training or other course of action that will be followed to achieve that goal; the length of time that will be required; the income and resources that will be needed to achieve the goal; a schedule of "accumulations and disbursements" under the PASS (that is, where the money will come from, and when and on what it will be spent); and finally, an indication of how the sums to be used under the PASS will be segregated. (106)

Once the request is approved, certain obligations must be met by the recipient. Funds covered under the PASS must be segregated from the recipient's other resources, either by establishment of a separate bank account or through some other technique that will allow them to be tracked. Material changes in PASS goals or in the methods for achieving them must be reported to SSA, so that the plan can be modified, if necessary.

Plans can be altered if circumstances change. SSA approval for the change is also required for it to take effect, however. If SSA approves the changing of a plan or its replacement with a new plan, the sums accumulated under the original will remain noncountable. But if an individual fails to comply with the terms of an approved PASS for three months or more, that plan will be deemed "abandoned." In the case of abandonment, or in the case of voluntary relinquishment of a plan, income that has been excluded from countability under the PASS will become countable again in the following month. The resources that had been excluded from countability under the plan will become countable in the next quarter.

In reviewing PASS requests that are submitted for approval, SSA has authority to decide whether the vocational objective is "feasible," in terms of the particular disability. (107) This involves a degree of subjective judgment on SSA's part going well beyond what we have encountered with its other determinations. Where the plan has been formulated by a state VR agency or by the Veterans Administration, such feasibility will ordinarily be assumed. But if some other agency, lacking VR's expertise, has prepared the plan, or if the recipient has prepared it alone, the possibility is somewhat greater that questions will be raised.

This does not mean that you need to be a VR client in order to win SSA approval for a PASS, or that VR has to be involved in the formulation of the request. It does suggest that if you have VR sponsorship for the educational or training course in question, this fact should be highlighted in the request.

Where VR is not involved, or when the self-support objective is of an uncommon nature, some thought may have to be given to how SSA can be persuaded of its reasonableness. But one should not anticipate this problem and should not attempt to defend or justify the vocational goal until or unless SSA raises some question about it. Should a question of feasibility come up, the role of the equipment which the PASS is meant to obtain ought of course to be emphasized.

Beyond the feasibility of a vocational goal, there is also the related issue of the reasonableness of the amounts of money that will be required to achieve it. Up till now, there has been some uncertainty over whether SSA had the right to review one's proposed method for achieving the vocational goal, once the goal itself has been deemed feasible. A recent administrative law decision suggests that it does not. Assuming good faith, it therefore appears that the SSI recipient has considerable latitude in choosing equipment to be obtained under a PASS. Of course, this does not mean that SSA offices will never again question the reasonableness of expenditures under a PASS. Here too, this sort of difficulty should not be over-

anticipated. A well-formulated PASS request will make clear the reasons underlying the choice of equipment items.

As indicated above, recourse to the PASS to obtain equipment for education or vocational training is perhaps its best use. In using the PASS to get technology, the key points are the relationship between the training program and a subsequent self-support goal, and the ways in which the equipment will contribute to the achievement of that goal.

Where the proposed configuration is of a nature that does not require all its components to be purchased at once, the schedule of disbursements in the PASS should provide for this. For example, if the self-support objective will require access by telephone to a computerized database, there is no reason why acquisition of the computer should be delayed until you have accumulated the additional funds needed to add the modem. Likewise, postponement of the hardware until all the software can be purchased makes little sense, if one could be learning to use the system during the interval.

In this connection, training costs should not be overlooked as elements of the PASS. Accordingly, instead of calling for the purchase of the entire configuration at its completion, the PASS should set up a disbursement schedule that provides for serial purchase of components, in the order that makes most sense, as soon as sufficient funds are accumulated for each. Of course, where one large item such as a paperless braille is involved, this sequencing may not be possible. But even then, opportunities for pre-purchase training should not be overlooked.

The PASS should also set forth the largest cost that can reasonably be foreseen for each component. If prices go down it is easier to accelerate the schedule of purchases or to terminate the PASS early than to secure SSA approval for an increase in the amounts of money involved. Small changes in one's component selection are not likely to require SSA approval, since they are not "material" changes. But if the change is major, or if one has emphasized a particular component in

one's request, there is no harm in notifying SSA of one's deletion of that item and of the reasons for the change.

At this point some discussion of the interplay between the BWE and the PASS may be useful. Anyone who is trying to exclude earned income from countability would be best advised to go the BWE route. After all, the procedures for doing it are simpler, SSA's oversight is less pervasive, and the PASS is only available for excluding income from countability if all other methods fail to do the trick. But if you are going to buy a big-ticket item which is only available for cash, the BWE may be unavailable because you cannot use it to save up for a big downpayment. Or if you need the equipment while still in school and before earnings have begun, there is no income to offset. Remember, with BWE's there must actually be earned income and it must be spent pretty much in the same month as it is earned. If the money is being saved up to meet the expense on a lump-sum basis, BWE status will not be granted.

The reader may ask why BWE's cannot be used to exclude unearned income, if the ordinary and necessary work expenses exceed one's wages. The answer lies in the concept itself. Suffice it to say, if none of the other income exclusions discussed earlier are applicable, and if unearned income is to be used for achievement of the self-support goal, the PASS is the vehicle of choice for this purpose.

Likewise, in the case of people who are not receiving SSI and who have resources that exceed the permissible limits, the PASS may offer means to retain these resources while obtaining the extra assistance that is needed to go to school or to obtain vocational training. If enough of these pre-existing resources can be applied to the self-support goal, the sums excluded may prove sufficient to establish eligibility for SSI.

If an already-employed person has earned income which cannot be excluded by other means, or if such a person needs resource exclusions to shelter income which is not countable, the PASS may also be worth contemplating. But in order for employed people to start a PASS, one serious difficulty must be

overcome. From the standpoint of self-support, the individual who is working is likely to be deemed to have already achieved that goal.

Thus, in such a case, the definition of self-support which SSA must be persuaded to accept is a little more subtle. That definition must be one of ability to assure long-term employment or of ability to avoid any further need for assistance under the transfer payment programs. Such persons should therefore emphasize in their requests the ways in which the equipment will allow them to retain employment and the ways in which it will eliminate the need for SSI. It may be that a showing of imminent job loss due to disability, comparable to the showing traditionally required for post-employment services under VR, will be required. Even then, the chances of success cannot be regarded as high.

Perhaps the most interesting interplay between BWE's and PASS's is the case where someone needs to save up for the equipment, or for making a large downpayment, prior to starting work. For the installment payments made after earned income starts coming in, BWE exclusion should be available. For the sums that must be accumulated and spent prior to starting work, the PASS may be needed. Ideally, use of the PASS to build up a downpayment or to build up full payment prior to employment can also help to secure the equipment needed for education or training.

To the degree that many blind students have unearned income such as school aid (which is countable because not based on financial need for basic food, clothing or shelter), the opportunity for its exclusion under a PASS may be doubly important. Not only may its exclusion result in the ability to use both SSI and these funds to obtain equipment to further one's self-support goal through education, but it may also yield an increase in the level of one's SSI payment. This is so where the educational assistance has caused some reduction of the monthly SSI payments. With the elimination (that is, the reduction to zero) of the amount of such scholarship aid that is

"countable," the PASS would in many cases actually lead to an increase of one's SSI payment up to the maximum level.

Preparing and negotiating PASS's is something of an art form. Expertise and experience in doing it may count for more than knowledge of the equipment or vocational objectives that are involved. Among community resources, independent living centers often possess substantial experience and expertise. Someone contemplating use of a PASS would do well to seek the counsel of an independent living program or of others with knowledge in the area. (108)

Owing to the requirement for a self-support goal, the PASS would not be of much use to persons seeking equipment for quality of life purposes. But like the BWE, the PASS is available for use by SSI recipients over the age of 65, provided they were receiving benefits as a blind person in the month before reaching that age. Accordingly, if an older person has a self-support goal, this possibility should be considered, particularly if it would result in an increase in SSI payments through exclusion of unearned income from private pension or other sources.

For persons, regardless of age, who were receiving benefits under a state aid to the blind program (AB) prior to enactment of the SSI program in 1972, there is one other special point to be borne in mind. If such persons have received assistance under the blindness category of SSI on a continuous basis since that time, what are known as the "grandfathering" provisions of the law may apply to them. These provisions require that if a state utilized income and resources definitions that were more liberal than those specified under SSI, these prior standards would continue to be used. (109)

Accordingly, an individual who meets the continuous coverage test should inquire whether the prior income and resources definitions used in their state were more advantageous to them than those applied by SSA. If so, these "grandfathered" state standards must be used.

It is important to understand that the sums of money involved in SSI are rarely likely to meet the full cost of needed equipment by themselves. Typically, ^{They} ~~They~~ will be used for downpayments, for installment payments or in other ways that involve their combination with other funding sources. For this reason, the role of credit in the acquisition of adaptive technology is key to the effective use of these social security funds in achieving equipment goals. It is then to this subject that we next turn.

Chapter V

The Credit System

Commercial credit represents another source through which prospective users may pay for their equipment. Its availability is not necessarily restricted to persons with jobs or vocational goals. It gives the user greater autonomy in the choice of equipment than vocational rehabilitation often does. Most important, the reservoir of commercial credit available in the nation's economy vastly exceeds the resources that all governmental programs can bring to bear.

In their efforts to fund equipment, blind people have not met with great success in penetrating the credit system. A number of reasons appear to account for this, some directly related to blindness, others reflecting the economic marginality of all too many disabled people. Yet, as real as are the barriers to entering the credit market, significant opportunities for increasing the level of credit utilization do exist. A review of the makeup and operation of the credit system should be helpful in marshalling these opportunities.

(a) Banks

Harry Truman is reported to have said: "I never could understand banks. The only time they'll lend you any money is

when you can prove you don't need it." While banks' lending criteria often seem to support this notion, we live in a society where there are more types of banks and more kinds of credit than ever before. The bank credit card, which represents the largest source of credit to individual consumers today, was virtually unknown when Mr. Truman spoke.

Before reviewing this range of institutions and their variety of loan formats, two preliminary observations may help put the analysis into perspective. First, although the anecdotal reports of would-be borrowers from all over the country strongly indicate disturbing patterns of ignorance and discrimination among many bankers, legal recourse is rarely available. Depending upon whether they are federally or state-chartered, banks are regulated by a bewildering array of oversight agencies and laws. Among federally chartered institutions, well over a dozen government agencies play some rule-making or oversight role.

In some instances, state human rights laws cover banking practices. In others, particularly those involving state-chartered institutions, banking fairness falls within the purview of the state bank regulators. Within its jurisdiction, the Federal Reserve System also bans discrimination.

Whatever the prejudices or mindset underlying denial of credit, lenders can usually articulate legally and commercially viable reasons for their decisions. In the absence within any one regulatory system of enough cases of credit denial to demonstrate a pattern, the problem becomes difficult to attack with new rules.

This suggests the second point: that from their perspective, banks usually have sound business reasons for what they do. In conversations with bankers, the following reasons seem to predominate in their often negative responses to blind loan applicants: the applicants lack the credit history or collateral assets normally required of borrowers; the nature of the requests are unfamiliar; lenders are unaware of resale markets for adaptive technology that would make the devices acceptable

as loan collateral, and public relations considerations would make foreclosure impossible in the event of default.

These considerations graphically portray the interaction of blindness-specific and more general factors. It is not unreasonable for banks to hold blind borrowers to the same financial standards as other customers. It is unreasonable to deny credit because the bank lacks courage to proceed against a blind customer who defaults.

Yet there are enough blind people who have secured loans to suggest that these barriers are surmountable. What combination of research and strategy may explain their success and might contribute to yours?

First, note that the era of personalized banking is steadily vanishing. Bankers do not sit down and make a highly individualized assessment of the loan applicant and of the loan's purpose. Rather, most loans today are prepackaged. Certain categories of loans — home mortgages, personal installment loans, passbook loans, Individual Retirement Account loans, auto loans, business overdraft lines of credit, credit card balances, etc. — are available at predetermined rates of interest, under specified terms, for people who meet the criteria applicable to each.

This being so, the most important step may be to review the categories of loans available in your community to determine where you might fit the requirements. It never hurts to have a friend behind the plexiglass or across the desk, but applying for the right kind of loan, in the proper amount, may go a long way toward neutralizing any adverse effects of blindness. In fact, if the transaction does not require a personal interview, the fact of blindness can often be omitted from consideration.

An example of this would be applying for a bank credit card. Not only is it usually transacted completely through the mail, but an underemployed person may have sufficient income to qualify for an initial minimum line of credit (\$500 or \$1,000) which can then be built up over time by prompt repayment, whether or not income also rises. Even unemployed people can

continue to use credit cards that they obtained while employed. Various banks aggressively market their credit cards from time to time, making it possible to obtain one for people who might otherwise be rejected.

Most equipment and software vendors will now accept credit cards, if only to avoid being at a marketing disadvantage vis-a-vis competitors. Their effective use can sometimes completely eliminate the need for a downpayment and can spread installment payments over a long enough period to make the monthly cash flow bearable.

In using credit cards, as in everything else, planning is essential. One's available balance must be large enough to meet the need, and one must have worked-out the arithmetic of repayment. If the credit line is not large enough, there are several things that can be done. Where one expensive item is being purchased, it may not be possible to charge only part of its cost, but on the other hand, the vendor may agree to accept a credit card for the downpayment while receiving subsequent installment payments in cash. This would be very useful for someone whose acquisition of equipment would lead directly to the generation of income.

If a multicomponent system is being purchased, each piece can be paid for in a different way. Seller financing terms might be more attractive for one component, use of a bank credit card for a second, use of the proceeds of a small cash loan for the third, and so on. In a multicomponent system, the timing and financing issues should be separately analyzed for each piece.

If credit card financing is the only means of acquisition, one may also be able to increase one's line of credit by obtaining a second card. If someone already has either a MasterCard or a VisaCard, and has a good payment record, the issuing bank or another bank will usually be quite willing to provide the other. In figuring one's repayment period, the high interest rates charged on these cards will raise overall cost. But if the minimum monthly payment is not too high, considerations of cash flow may outweigh total cost.

Many of the packaged loan formats do not allow for much flexibility as to the type of collateral that will be accepted. It is nevertheless important to review the options in order to assess what you can provide. In the classic auto loan situation the vehicle serves as collateral for the loan. If this becomes prevalent with computer loans, as seems likely, there may well be reason for choosing a mainstream computer that is familiar in business. If one is a retired person who owns a home; or if one has deposits in the institution which can be used to secure a loan; or even if one has friends or family who would agree to guarantee or "cosign" a loan, formal eligibility requirements may likewise be more easily met.

To say that banking has become impersonal is not to suggest that, where one fails to meet applicable guidelines for any form of credit, personal contact may not hold out the possibility for some recourse. As indicated above, it never hurts to know people with the proper affiliations, but failing that, a conversation with a loan officer, bank manager or other executive may be worth having. If you doubt your creditworthiness, this should be done at an early point in the process. If an application which you think ought to have been approved is denied, such a meeting can as usefully be arranged at a latter point. Any application can be reconsidered. One's special circumstances, indeed one's blindness in relation to the nature and purpose of the loan, can provide a plausible and non-confrontational basis for such a meeting, though avoidance of all awkwardness and discomfort are by no means assured.

In any discussions with bank officials, it is useful to find out what their problems with the loan may be. The would-be borrower's reactions and suggestions will depend to a large degree on bankers' willingness to be drawn out on this point. One recent example may show how this can help. There, a banker was willing to say that the problem with the loan was the "high mobility" of the equipment (that is, its ability to disappear). In such a case, there may be some advantage in choosing equipment from an adaptive manufacturer, because then it can be

made clear to the banker that the supplier's sole-source servicing capability provides a virtually foolproof means of tracing the item. If the problem is the fear of bad public relations in the event of default, reassurance can also be conveyed on this point. In any event, whether the problem seems in any way blindness-related or has simply to do with one's failure to meet financial guidelines, turn the meeting to advantage by inquiring, as earnestly and persistently as needed, what change in circumstances would result in a more favorable outcome.

One point that often emerges from discussions with bankers is that the applicant's credit history is poor. The credit reporting system often disadvantages disabled customers in a number of ways. Blind people who are entering the credit market at a later age than most other people do, who are returning to the credit market after a period of absence, or whose economic situations underwent turbulence at the time of sight loss are among the groups who suffer for the lack of opportunity to adequately explain the bare facts. Sometimes a face-to-face meeting between two flesh and blood human beings can help to put the application into a fuller context than would otherwise be available.

If a meeting with a bank official reveals that an unfair or inaccurate credit report may have played a role in the denial, the applicant should take steps under the Federal Fair Credit Reporting Act to obtain a copy of the report and to seek to supplement or amend it, as appropriate. This should be done even if the bank in question can be persuaded to change its decision, because you never know where else that credit report has been or where it is going.

Although it may be slight consolation, such face to face encounters can also have an educational value. If faced by a sufficient number of applications for equipment-related loans from blind people, some banks have expressed a willingness to consider establishing policies to cover such requests. This is most likely to occur with larger, multi-branch or "money center" banks. But it will require discussion with officials much higher

up than the loan officer or branch manager level. It is a worthwhile project for major organizations of blind consumers.

Where blindness or the unfamiliar nature of the request seems to be an issue, the suggestion that this be done should be made. Means by which service agencies can accelerate this process are discussed in Chapter IX, What Agencies Can Do.

If the fact of blindness does enter into the refusal in an arguably discriminatory way, such a face-to-face meeting can be useful in documenting this as well. Where banks have been vulnerable to charges of discrimination against blind people, it has usually been in connection with such matters as refusal to rent a safe deposit box or the insistence upon a joint account with a sighted person. If the discussion with the bank reveals that no change in one's creditworthiness would make any difference, that the bank is imposing conditions which differ from those that apply to other customers, or that vision in any way figures adversely in the refusal, legally actionable discrimination may exist.

Again, as noted above, even assuming the existence of applicable antidiscrimination laws, bias in the withholding of credit from individuals is very hard to prove. Where there is a pattern of refusals, involving a large enough pool of applicants to allow for comparisons between them and other borrowers, evidence may be developed. But there are rarely enough blind or disabled applicants to allow such statistical comparisons to be drawn. Moreover, even if a plausible allegation of discrimination can be made, the time required for its adjudication would be much longer than anyone with a serious need for technology could bear to wait.

Beyond the question of eligibility for credit, there is also the issue of how large a loan one will get. With most types of loans, creditworthiness is assessed under formulae that link permissible debt to size of income. It may therefore prove the case that one can get a loan, but only for less than needed. This is particularly common among underemployed persons. If one can get a partial loan, possibilities for deferring its use should

be considered. In this way, a loan which by itself may be inadequate for full purchase or for a downpayment can still be useful in conjunction with other funding sources that are developed.

This deferred loan concept is perhaps best-known in the area of auto loans, where banks typically give customers thirty days or more to shop for the car of their choice once the loan has been approved. One typically pays no interest until the money is actually drawn-down, and the knowledge that one has the cash waiting may help to get the ball rolling in a number of ways.

(b) Other Lenders

In today's financial marketplace, banks are no longer the only source of cash loans. Other options, ranging from finance, second mortgage and insurance companies, to credit unions or stock brokerage firms should be reviewed.

Credit unions make loans readily available to their members. An individual anticipating the need for loan funds to obtain equipment might wisely consider joining one. Their loans are ordinarily available at favorable interest rates. Moreover, some credit unions have attempted to involve themselves in community improvement projects, to the extent allowed under law, and possibilities for cooperative relationships between them and consumer groups of visually impaired persons should be pursued on a grassroots basis.

Loan or finance companies, by contrast, usually charge high rates of interest. This is the trade-off for default rates that are higher, and for loan criteria that are less stringent than those that would be tolerable for banks. Yet if one's need is for a downpayment, the higher interest rates may be worth absorbing.

Possibilities for borrowing against a wide variety of assets are more numerous than is commonly supposed. Certain life insurance policies, stocks, bonds and pension rights are among the many assets through which funds can be raised. Often, because of the ironclad security these assets provide, interest rates will be low and other terms reasonable. Whether

one should borrow against such an asset depends upon many factors. But if one's need is for immediate cash or a downpayment, and if one is confident about one's ability to repay the obligation, and if the assets pledged are not too disproportionate to the risk of that confidence being misplaced, then these strategies may be worthy of serious exploration.

Real estate has become an increasingly important source of loan capital. With the development of new instruments such as "reverse mortgages" and with tax law changes that restrict the deductibility of interest under other kinds of loans, these trends may prove of importance to older blind persons who own their own homes. There now exist mechanisms that allow people to write checks against the value of their property, much as they would borrow against an approved credit card limit. If relatively expensive equipment is needed, or equipment that cannot be obtained under the non-vocational rehabilitation programs discussed in Chapter III, this source may be worth considering.

Obviously, though, as the importance of the asset rises, so does the risk. No one should think of encumbering their home, unless they are certain that default will not occur. By contrast, the reverse mortgages impose no obligation of repayment, but with them the house cannot be bequeathed to children or other beneficiaries after the occupant's death. Low-income homeowners contemplating such loans should also be especially sensitive to their possible impact upon Medicaid eligibility or upon other means-tested assistance.

(c) Manufacturer and Retailer Financing

Another major source of consumer credit is found in the installment purchase plans, rental agreements or lease purchase programs maintained by the manufacturers and distributors of computer equipment and other consumer goods. Automobile companies are perhaps best known for providing financing through their dealers, but the manufacturers and vendors of all manner of appliances and technological devices do so as well.

This form of marketing has some very distinct implications for blind and visually impaired persons, and these are likely to grow as mainstream computer equipment becomes more and more accessible and as retailers compete more aggressively with banks for the consumer credit market. While the arrangements encompassed under this rubric vary widely, they have in common that instead of receiving a cash loan the buyer receives the equipment itself and assumes the obligation to make payments over a period of time.

If the arrangement is a rental, payments may continue indefinitely, without the accrual of any equity or ownership interest. Rentals are useful if the equipment will be needed temporarily, while vocational rehabilitation-sponsored equipment is awaited or where the user wishes to test the equipment under realistic conditions before making a commitment to the particular configuration. There are firms that specialize in renting computer equipment. They often charge large, refundable deposits, but over a reasonably short period of use the overall cost will often be only a fraction of that required for purchase.

If the arrangement contemplates eventual ownership, payments are made over a specified period. Return of the equipment may or may not be permissible under the contract; interest and principal payments may or may not be equally divided in each payment; and the lease agreement or contract of sale may either be between the buyer and the seller or between the buyer and a leasing company.

Although the interest rates under these installment purchase arrangements are generally a bit higher than one would pay for bank loans, their availability is sometimes greater, with the result that people who can not get bank loans may be able to secure this form of credit. Such options may be especially useful for underemployed persons or for younger people just entering the credit market. Usually, if you watch the sales carefully and are prepared to be flexible in the choice of equipment, a suitable, if not ideal, computer can be purchased on

reasonable terms by anyone who is stably employed.

Because downpayments are typically modest, this form of financing is also important to people who can meet installment obligations, but lack the resources for a large upfront payment. Here it is crucial to remember that financing terms and overall price are very different issues. As manufacturers and dealers compete on price, so, in many instances do they use credit terms, including downpayment and interest rate, as marketing tools. By watching the competition carefully, mindful of the range of computers that are viable in meeting your needs, it is likely that before too long an acceptable package will come along. In such a case, it may even be worthwhile to purchase a more costly computer, if the terms of purchase are significantly more attractive.

Competition in financing terms also means that minimum income requirements will vary. In some cases, this form of financing may even be feasible for sheltered workshop workers, though it is probably desirable to emphasize the nature of one's work (technician, assembler, etc.), and the identity of one's employer (the agency) rather than the locus (sheltered workshop) of one's employment in completing any required application or credit information form.

Because microcomputers are marketed as much for personal as for business use, the existence of dealer-based financing opens up procurement opportunities for persons who do not have vocational goals. For these people, including homemakers and older persons, it may prove possible to qualify for one promotion or another. The issue is to establish payment obligations that are tolerable within the framework of the individual's monthly cash flow.

When thinking about dealer financing, one should not limit one's horizons to computer stores. Many national department store chains now include computers and peripherals, either directly or through in-store franchises, among the items they sell. If you have a charge account at Sears, Macy's, etc., such stores should not be overlooked as possible sources for some of

your equipment. Such residual credit often is available to retired or to adventitiously blinded persons who obtain the charge accounts through spouses or while still employed.

By and large, adaptive equipment manufacturers have not made great use of consumer credit. Triformation Systems of Stuart, Florida, Vtek of Santa Monica, California and Telesensory Systems of Mountain View, California are among adaptive technology manufacturers that have experimented in this area. Their initiatives have been fitful, and unfortunately, there is no leasing company in the adaptive technology industry which could offer consumer credit. Providers of adaptive software have tended to do better in this connection, but because software typically costs so much less than hardware, the issue is not so great with it.

In part, the relative failure of adaptive equipment manufacturers to venture into the consumer credit realm derives from the small size of their markets and the undoubtedly high costs of providing credit. In part, too, it results from other factors, including the irrelevance of consumer credit to the vocational rehabilitation agencies, other governmental entities and large corporations that have constituted the principal targets of their marketing. Several current trends in the structure and economics of the adaptive equipment industry suggest a likelihood of favorable evolution in these policies over time.

Consumers may be able to hasten this process by making their views known, but it is probably true that increased use of credit by sensory aids manufacturers would raise the already high prices of their products. The amount of such an increase would be far less in the case of credit card acceptance than it would be with the establishment of a leasing or dealer-financing program.

Because marketing strategies will always be in flux and because the individual consumer does have leverage, prospective buyers should never hesitate to ask about manufacturer credit. Indeed, if one is about to plunk down several thousand dollars, one should not be reticent to demand, on pain of going else-

where, that the distributor make arrangements to accept credit cards.

Whether dealing with banks, manufacturers, or retailers, the prospective credit buyer should remember that the status of customer is very different from that of client. Too often, consumers address the marketplace with a timidity and defensiveness which reduces the leverage and autonomy that they actually possess. For people whose economic resources may be limited and whose experience as buyers of credit may be minimal, this tendency holds additional pitfalls.

Rising to the full dignity of customerhood, one should remember that firms which extend credit are in the business of extending credit and usually earn a considerable profit by doing so. They are not doing you a favor. With the range of credit sources that exist in today's economy, and with increased competition among credit providers, they need you just about as much as you need them. With patience and imagination, it is more possible than ever before for growing numbers of blind people to enter the mainstream commercial credit system, as so many of their fellow citizens, the responsible and the dead-beat alike, have already done.

(d) Governmental and Nonprofit Loan Programs

Commercial credit, though by far the largest, is not the only source of loan funding. The goals of this discussion are not to provide a complete resource list, because things change too fast as old programs go out and new ones come on-line. This section will review some options that have been used, giving illustrations of each and suggesting the range of users to which each is most relevant.

Broadly speaking, public and nonprofit loan programs can be divided into cash loans, loan guarantees, equipment loans or equipment rentals. It is dangerous to use too rigid a classification system, for this would run the risk of excluding hybrid models or diverting thought and effort away from the development of new approaches. An excellent summary of such programs, as they relate to all disabled groups, has recently

been compiled by the Electronic Industries Foundation. (110)

Over the past three years such pace-setting states as New York and California have established handicapped equipment loan funds. (111) Massachusetts is among other states considering such a program, and the concept is likely to attract further interest as disability advocates respond to the curtailment of federal support by intensifying their efforts on the state level.

Such loan funds can be designed either to make direct loans or to provide loan guarantees. The latter format is preferable, since the public-private partnerships it creates result in a much greater leveraging of governmental funds than is possible with a direct loan approach. However designed, such funds are likely to ignite more demand than they can meet. Blind people are likely to face some competitive disadvantages in obtaining support under such state initiatives. Also, the level of support involved is likely to be small, but, in concert with other sources, such programs may prove helpful. Time alone will determine their broadened use or the relevance to blind equipment seekers of the eligibility criteria, financial responsibility standards or other conditions they adopt.

Consumer input in the design of these programs is very important. In 1982, the United States Congress's Office of Technology Assessment (OTA) recommended the establishment of a federal loan guarantee program for disability-related technology. (112) But such a development, however cost effective and however responsible as an investment strategy, is improbable in the current budgetary climate. Federal and state loan guarantee programs are well-known and widely utilized in settings ranging from student loan guarantees to the rescue of Chrysler Corporation. Unfortunately, specific legislation is usually required to extend the concept to disabled individuals.

The distinction between direct loans and loan guarantees is an important one. When loans are guaranteed, whether under public or private auspices, banks are justified in making them to individuals who might not otherwise qualify for credit.

Concessionary loans are those which financial institutions make at rates of interest lower than would ordinarily be charged. These two concepts typically interact in loan guarantee settings.

A number of interesting loan and loan guarantee programs have emerged from the nonprofit sector, some involving direct loans by agencies, others involving the assumption of a guarantor role by agencies for loans made by banks. An example of the first sort is the long term, low interest, adaptive equipment loan fund set up in 1984 by the Vera Institute of Justice in New York. Utilizing a foundation loan to Vera, this fund provided equipment to three categories of blind and visually impaired persons: those needing equipment to enter employment, to maintain employment, or to advance in employment. The Institute purchased the equipment which was then leased to the user for an up to six-year period at a below market interest rate and without downpayment. At the conclusion of the lease term, the user became the owner of the equipment, having paid for it in full.

A commendable example of the loan guarantee format is a program at the Cleveland Society for the Blind's Storer Center under which the agency stands as guarantor for loans made by cooperating banks at concessionary rates. Such programs have considerable leverage value, because they allow the agency's contribution to guarantee many more loans than the agency could have made directly.

A number of other models, typically operating on a local or regional basis, and mostly involving direct loans by nonprofit organizations to designated classes of consumers, also exist. Sources of these loans for blind persons in recent years have included: the California Council of the Blind, the Braille Institute in Los Angeles, the Conklin Center in Daytona Beach, Florida, and others. (113) Models have included rental programs, use programs (where equipment was available in a centralized setting), programs in which the products of a particular manufacturer are subsidized for purchase, and

programs established by local affiliates of national consumer organizations. (114) Grant programs also exist, such as the program of the Philadelphia-based Associated Services for the Blind to subsidize up to 50% of the cost of specific devices.

As this brief list suggests, models abound. It is important to network in the consumer and service provider communities of your region and state to determine whether any relevant programs are in operation. Because such programs are still so few in number, there is little point in discussing how a consumer might best choose among a cash loan, an equipment lease, or a rental program.

Many of the governmental and nonprofit loan programs offer the borrower some flexibility in repayment terms. Even in some commercial credit settings, this point may be negotiable. Many factors will influence how much time a person would like to have for repayment of a loan, or whether the individual even needs to own equipment at all. Among these, cash flow is perhaps the most important. One's ability to keep to a repayment schedule, along with a clear sense of what are the implications if one cannot, represent key variables in determining the usefulness of available credit in meeting your needs. If repayment terms are subject to negotiation, careful attention to them may be every bit as important as the availability or the amount of the loan.

In determining the cash flow implications of any repayment schedule or rental fee, one important factor that many people overlook is the potential tax deductibility of all or part of one's payments. After all, it is the net (or after-tax) cost of the loan that really matters for people who will have earnings or other taxable income. In light of this and other important ways in which the tax law bears on the availability of equipment to blind persons, it is to this subject that we next turn.

Chapter VI

The Tax Code

If President Truman were alive today, he might well say of the tax system: The only people who study the tax law are rich enough not to need to worry about it. But the truth is that, properly understood and effectively exploited, the tax laws offer benefits to relatively poor people, which can be every bit as important as are the preferences and exemptions they afford to the rich.

As it relates to the financing of adaptive technology, we care about the tax system for three reasons. First, it bears heavily upon the net cost of equipment and upon timeframes within which these costs are distributed. Second, it provides means for increasing one's weekly or monthly cash flow in ways which, though involving small amounts, can mean the difference between being able to budget for equipment and being unable to do so. And third, the tax system represents a source for federal subsidization for equipment of immense magnitude, including subsidization by those who have money of those who do not.

Last October, the Tax Reform Act of 1986 was enacted. (115) This law represents the most far-reaching revision of the

Internal Revenue Code in 32 years. Like the Rehabilitation Act, it will take some time for the full implications of this new law to become known. Should IRS regulations result in interpretations that are of importance to blind equipment seekers, a supplement to this guide will be issued.

There are several ways in which the cost of technology for blind and visually impaired persons may be tax deductible: when the purchase is a health care expense, either for oneself or a dependent; when the expense is incurred in the production of income, whether through the conduct of business or as an employee business expense; or when it constitutes a charitable contribution on the part of the taxpayer.

The availability of one or more of these deductions depends upon the circumstances, purpose, and documentation for the purchase. Where more than one category is available, the choice of which to use may still be important, because the length of time over which the deduction can be claimed or the proportion of total cost that can be deducted, will differ.

(a) Medical Expenses

Health care expenses are tax deductible, but only to the extent that they exceed 7.5% of "adjusted gross income" (AGI). (116) Under former law this threshold figure was 5%. As before, one must itemize in order to claim health care deductions.

All medical expenses incurred within a given year are deductible in that year. Medical care expenses incurred on behalf of a dependent, including a spouse, are deductible on the same basis as those incurred on the taxpayer's own behalf. This is a particularly important consideration for the parents of children who need equipment as an adjunct to their special education programs.

The definition of health care expenses is broader than generally appreciated. The basis for deductibility of adaptive aids under the health care category derives from their role in "overcoming" or "mitigating" the effects of disabilities or "defects." On this theory of overcoming a disability or defect, such expenditures as the cost of telecommunication devices for

the deaf (TDD's), equipment to make driving feasible for persons with impaired limbs, and powerful lamps and print enlargement equipment purchased by a taxpayer for use in school by a visually impaired dependent child have been held tax deductible as health care costs. (117)

The health care expense theory comes into greatest prominence in those situations where business deductions are not available. Such cases would include those of children, elderly persons or others outside the work force, and cases involving items regarded as inherently "personal" in nature, regardless of their intended use in the production of income. Eyeglasses or guidedogs, even where used primarily or solely for business or employment, are examples of "personal" medical items. (118)

As these examples demonstrate, to qualify as a deductible medical expense an item need not necessarily be prescribed by a physician. The deductibility of guidedog expenses under the health care category is perhaps the best illustration of this point. The expenditure's purpose and role in overcoming or mitigating the sensory limitation will be the crucial factor.

Problems can sometimes arise in determining the amount of the deduction. Where an item or system can be separated into routine and adaptive components, the Internal Revenue Service may allow deduction only for that part that overcomes the defect. Thus, for example, in the case of the specially equipped car, the entire cost of the basic vehicle would not ordinarily be deductible. Only the cost of the add-ons necessary to make it usable by the physically handicapped driver would qualify. Similarly, in a case involving braille books and magazines purchased for a child, the IRS ruled that only the excess cost of the braille versions over the standard print editions would meet the definition of health care costs.

A potentially important distinction for visually impaired equipment users is thus suggested, based on items chosen. Where an item, such as a hard-copy braille printer, an enlarging monitor or a talking blood pressure gauge, is designed specifically for use by a visually impaired individual, it should

not matter that the item could also be used by a sighted person. Devices such as these are, by nature, designed to overcome "the defect."

But when a standard computer forms the basis of one's system, its non-defect-related character, together with the relative ease of separating its cost from those of the adaptive add-ons, may present problems. Nevertheless, to the extent that the taxpayer can document the compensatory nature of the entire system, the risk of attempting to deduct the computer itself is fairly small. Key elements in the decision would include: the fact that the computer is used only by the visually handicapped person with the adaptive peripherals and software, that it would not have been purchased but for the fact that it represented the only means for the visually impaired person to engage in the activities that it facilitates, and that no device designed specifically for blind persons exists that would have fully met these needs.

The taxpayer should be prepared to explain exactly what the device does. Here, the key consideration is the ways it allows the user to read, write, communicate or perform other life tasks. It is of course not necessary to contend that blind people cannot or have never done these things before computers, any more than it would be to say that hearing impaired persons never watched television before the advent of closed-caption decoders. It is the functional capabilities and the compensatory nature of the device that should always be stressed.

Even if purchased to help overcome a vision loss, a computer's tax deductibility may still be in doubt. To qualify for this treatment the computer should not be used by other non-handicapped members of the family or household for general purposes. This does not mean that no one else can ever touch or use it. It relates rather to the purpose for which the device was acquired and to its predominant use for that purpose.

As noted above, health care deductions are available only to the extent that they exceed 7.5% of AGI. This means that as income rises, so must the cost of the equipment, if it is to be

deductible. If one has other health care expenses, these of course will also be taken into account in determining whether one has reached the threshold. But even if one does have a large enough health care deduction, itemization will not necessarily be feasible. For itemization to make sense, one's total deductions, from health care or from other sources, must be larger than the amount of the standard deduction which all taxpayers may claim. To the extent possible, people should therefore plan their equipment purchases with all their deductions in mind.

The notion of major equipment purchases by low-income persons in most cases assumes either the use of savings or recourse to borrowing. In either case, tax deductibility represents at least a partial subsidization. The new tax law will significantly change these calculations on the part of low-income wage earners and retirees. It will do this in two ways. First, by raising the threshold from 5% to 7.5% of AGI, it will reduce the proportion of equipment costs that is deductible at any given income level. Second, and far more important, the new law will raise the income level that a person must reach before any taxes are due. This will mean that many low-income blind people who previously paid some federal income taxes will now be liable for less or none at all. For them, tax considerations may drop out of the equipment equation.

Unlike certain business deductions which must be depreciated (that is, divided) over several years, the entire amount of the deductible health expenses can be taken in the year when the expenses are incurred. This can increase the leverage value of the tax deduction. If, for example, you use a credit card to purchase a \$3,000 closed-circuit TV magnifier, you should sometimes find it possible to claim the deduction before having fully paid for the item. This should be so where your credit card or installment loan payments extend into the following year.

Additional leverage derives from the fact that the health care deduction, like other deductions, is available no matter how late in the year you made the purchase. This principle is

perhaps most familiar in connection with babies born in the waning hours of New Year's Eve, just in time to be claimed as dependents for that year.

(b) Business Deductions

Deductibility of equipment under the health care theory depends mainly on the nature of equipment. Deductibility of the equipment under the business expense theory depends on its being used in the production of income. Except in those cases where the item is inherently personal in nature, the use of adaptive technology for business purposes qualifies it for tax deductibility. Thus, in those cases where blind and visually impaired persons buy necessary devices for use in business or in their employment, the cost of these items can be written-off. It should make no difference what the items are, as long as they represent "ordinary and necessary" expenses in the production of income. (119)

Where items are deductible as ordinary and necessary expenses incurred "in the production of income," there is no 7.5% threshold. The entire cost is deductible. But it may not be completely deductible in the year of the purchase. Instead the cost may have to be depreciated (that is, spread) over several years.

Depending upon the type of equipment in question, one may have to carry the deduction forward over several years in accordance with the depreciation schedules applicable to the "expensing" of the technology in question. The logic of these schedules is that the deduction should be spread out over the useful life of the equipment. The advice of a tax expert should be sought. If one is in business, an accountant is already likely to be in the picture.

Although the rules are rather tricky, business expenses may sometimes be deductible, even if the business does not show a profit for the year in question. This can be done either by using the loss to offset income from other sources, or by carrying the loss over more than one year. It is imperative to consult an accountant before trying to do this, but where adaptive equipment represents a major component of busi-

ness startup costs, the possibility should be borne in mind.

Employee Business Expenses: Employee business expenses are an important subcategory of business deductions. For equipment to be deductible on this basis, it must be used in, and necessary for, one's employment, and it must not be reimbursable. The employee business expense deduction can be very important for blind workers who need equipment to do their jobs but whose employers do not provide it.

Under the new law, employee business expenses will be deductible under the "miscellaneous deductions" category. (120) But miscellaneous expenses will only be deductible in the amount by which they exceed 2% of AGI. In being subject to a threshold, miscellaneous deductions are similar to health care expenses. Employee business expenses claimed as miscellaneous deductions are unlike the business deductions claimed by the self-employed, because there is no such threshold applicable to expenses incurred in the conduct of a trade or business. In fact, the self-employed person who claims business deductions, including the cost of necessary equipment, need not even itemize in order to do so. This is because business revenues and losses are reflected on the income tax return only as a net figure, after they have been computed on a separate form called Schedule C.

Treatment of employee business expenses as miscellaneous deductions will mean that a blind worker with an AGI of \$12,000 may only be able to deduct that portion of equipment costs which is greater than \$240 (\$12,000 times 2%). Remember, though, that miscellaneous deductions is a broad category. It includes other employee business expenses such as uniforms and union dues. It includes professional organization memberships and professional licensing fees. It includes various nonemployment-related costs ranging from incidental costs of personal investing to tax preparation assistance. Because of its scope, one's total expenses under this category may be enough to exceed the 2% threshold, even if the equipment would be insufficient to do so by itself. Itemization

will be generally less attractive under the new law, because fewer tax deductions are available and because the standard deduction is higher.

One other advantage of the business deduction is that no issue will ordinarily be created over whether the equipment is specifically designed for overcoming an impairment. Assuming that the item is ordinary and necessary for trade or business, or necessary for employment, deductibility will be allowed. For this reason, if someone were buying a standard computer with an enlarging monitor for use in employment or self-employment, splitting the deduction between business and health care might be worth consideration. The computer would go to the business side, and the enlarging monitor, as the device that compensates for the impairment, would go to health. Whether one would wish to do this depends on a number of the factors discussed above, including: the depreciation schedule applicable to your business deductions, whether you have other health care costs to meet the 7.5% requirement, the total amount of your business deductions in relation to profits, and several other factors which a good accountant should be able to assess.

Employee business expenses are ordinarily deductible in the same year as the money is spent. Nevertheless, where capital equipment such as a computer, hard-copy braille embosser or other "big ticket" item is involved, one should consult an accountant to determine whether any mandatory depreciation schedule applies.

Having said that business expenses and employee business expenses are deductible when necessary to the production of income or to the performance of the job, we are faced with the question of how IRS defines this concept of necessity. There appear to be two standards. Equipment that is ordinarily and routinely used in business will rarely be questioned. No firm has ever been denied a deduction on purchase of a typewriter for use in its business, even though some economists believe that the heyday of American commerce occurred before the

typewriter was invented. As more sophisticated equipment comes into wider use, its ordinariness tends to be established as well.

In the case of employee business expenses, the problem of demonstrating the "ordinariness and necessity" may be a bit more complex. In addition to demonstrating functional necessity, the individual may need to show why a routine item was not provided by the employer. With some of the more unusual items that visually handicapped people will be buying, these questions may actually be easier to answer. But with items like mainstream computers, particularly if bought by workers for use at home, both blind and sighted employees may anticipate some problems. Documentation is the best protection, but in a case where the employer or where job performance do require the equipment, any questions that do come up should easily be put at rest.

When it comes to equipment that is purchased for upward job mobility, the employer's willingness to incorporate the equipment into current work may be the key variable. Whatever "work necessity" may ultimately mean, it does not denote a threat of job loss. It is not so severe a standard as that traditionally applied to post-employment services under Vocational Rehabilitation.

As discussed above, certain items, such as guidedogs or eyeglasses, are deductible only as health care expenses. Even if they are used exclusively for employment or for business, they are considered to be "personal" in nature. By the same token, where items are deductible as necessary for employment, it does not matter that earnings were not the source of the money used to pay for them. For example, the fact that someone has been able to use Social Security funds to subsidize the purchase of these items does not limit their tax deductibility. The money that someone receives from Social Security under SSI or SSDI may or may not be taxable depending on one's total income. But that is a separate issue.

Despite the 2% floor for miscellaneous itemized deductions,

a provision of the new law suggests that alternative means may exist for deducting at least some employee work expenses. A rather obscure section adds a tax deduction for Impairment-Related Work Expenses. (121) This new category refers specifically to deductibility for "attendant care services at the individual's place of employment and other expenses in connection with such place of employment which are necessary for such individual to be able to work."

It appears that to be covered under this section of the law the expenses must be of a nature that would have been deductible under the business expense category. If this is so, then it would appear that the purpose of this provision is to get the employee business expenses of handicapped workers out from under the 2% requirement.

A number of important questions regarding the scope of this subsection remain to be answered by IRS's implementing regulations. Central among these is whether equipment is meant to be included. Since "attendant care services" represents the only specific example of what was contemplated, we can only wait and hope that adaptive technology will also be covered.

(c) Charitable Contributions

Unless the recipient of equipment is a dependent of the purchaser, the cost of adaptive technology incurred by one person for another is not tax deductible. This is because individuals are not tax exempt. Only nonprofit organizations, with suitable charitable, educational or other public purposes, can ordinarily qualify for this exempt status. (122) Most nonprofit blindness-service agencies are tax exempt on this basis, as evidenced by a certificate or letter from the Internal Revenue Service. When individuals or businesses contribute money to blindness-service agencies, they receive tax deductions for the amount of these gifts. But there are ways that this process can be better utilized to stimulate wider distribution of technology.

Individual donors can channel equipment to users who are

not their dependents, with tax advantages for themselves, if a tax-exempt organization is willing to serve as conduit. Such contributions may be of cash or of equipment. Agencies can institutionalize this approach in varying ways, achieving thereby a significant flow of equipment to clients and tax advantages to the givers.

An agency program for doing this is necessary. This is because the contribution must actually be to the agency. If I were to go to an agency and offer to give it a piece of equipment if the agency would immediately hand that equipment over to my friend, the tax deduction would be disallowed. IRS would rightly conclude that I was attempting to evade the law, and the agency's own tax exempt status might be jeopardized. But if the agency has a program for accepting equipment and for recycling it to clients, there are a number of ways in which potential givers can quite legitimately gain tax advantages greater than they would get by donating cash. Provided there is what the law calls an "arms-length" transaction, such programs can be useful in bringing technology to identifiable members ^{of} the community. The major problem with such programs may be that many agencies would prefer to receive the cash. They could always make good use of it, but that can not always be certain with the equipment that would come in.

(d) Cash Flow

Anyone who has taxes withheld from their wages, who pays business taxes or who files quarterly estimated tax returns is engaged in making installment payments on an annual tax bill. In those cases where the existence of a substantial deduction for equipment will result in a predictable lessening of one's total tax liability, the law allows for proportional reduction in the size of those installments.

To understand how withholding can be used to increase cash flow, it is necessary to review a few points about the way income taxes are computed. Under the old law blind people were entitled to two personal exemptions. Elderly persons were also entitled to an extra exemption, but everyone else was

entitled to only one. In 1986 the value of the two personal exemptions was approximately \$2,160. What this meant was that people who claimed both exemptions had their taxable income reduced by that amount.

Under the new law, effective this year, the second exemption for blind and elderly people is abolished. But this does not have so great an impact, because the amount of the one personal exemption that these and all other taxpayers retain has been increased to \$1,900. Beyond the personal exemption, all taxpayers are entitled to a standard deduction. The standard deduction (which also used to be known as the "zero bracket amount") is \$3,000 for 1987. This represents about a \$500 increase over the 1986 zero bracket amount. In addition to all of this, the new law creates an "additional standard deduction" for blind and elderly persons. For a single person this additional deduction is \$750 per year.

All of this means that the blind taxpayer has an automatically available deduction of \$3,750. Unless the individual can generate itemized deductions in excess of this amount, there would be no reason to itemize. When withholding rates are calculated, they are based on the standard deduction and on the number of exemptions that the worker claims.

In the past, taxpayers who knew that they were going to have substantial deductions in a given year often chose to reduce the amount of money withheld from their wages. This was done by increasing the number of exemptions claimed on their W-4 forms by approximately one exemption for each \$1,000 worth of deductions over the zero bracket amount. Likewise, there have always been many people who preferred to be overwithheld, as a form of forced savings. These people claimed fewer exemptions than they were entitled to (sometimes even zero exemptions).

While the new law somewhat restricts these opportunities for creative tax planning, the same question must be asked under the new law as was posed under the old: Do you want to be overwithheld, underwithheld, or to come out even? If you

are going to purchase job-related equipment during the year, the opportunity should exist for reducing one's withholding and thereby increasing cash flow which may be necessary to help pay for the equipment.

Here it is necessary to correct a widely held misconception. Many people assume that the number of allowances that can be claimed on the W-4 is limited to the number of exemptions they will be listing on their tax return. This is not true.

A taxpayer has the right to claim whatever number of allowances (at least up to eight) are necessary to insure that only the amount which will actually be owed for the year is withheld. A taxpayer has no obligation to make an interest-free loan to the government.

In fact, if a worker has determined that no taxes will be owed for the year, it is often possible to obtain exemption from income tax withholding. Such exemption, as well as approval for more than eight allowances, must be specifically requested from the IRS. The procedure is not difficult. The cash flow advantages of doing this can be considerable, but the risks of being wrong, including penalties, can also be costly.

If cash flow is a serious issue in paying for one's equipment, it may even be useful to follow a policy of underwithholding. There is no penalty for taking a loan from the government, rather than giving it one, except in those cases where one's final payment (that is the check that accompanies your return), amounts to 10% or more of the individual's overall tax liability for the year.

Ideally, one should maximize cash flow to the point where no refund will be awaited and where any underwithholding that must be made good is affordable. There are additional advantages to this approach for persons who live in states with high state income taxes, because the amount withheld by the state is usually keyed to the number of allowances claimed for the federal. Ability to make good the difference with the state when the day of reckoning finally comes must also be taken into account.

Another dimension of the cash flow problem is of interest to those low-income persons, particularly single parents, who qualify for the Earned Income Tax Credit (EITC). The law allows those who qualify for this credit to have its value refunded to them by their employers. (123) In this way, again, cash flow can be maximized immediately, without having to wait for a refund down the line. In a tight situation, where a few dollars a week can mean the difference between being able to pay for your equipment and not being able to pay for it, this sort of thing can provide the critical margin.

The W-4 (or W-4a which IRS has recently introduced to simplify the computation process) is rarely a sensitive enough instrument to get the numbers exactly right. In some cases, a bit more precision may be achieved by modifying it during the year. This is perfectly legal, but many employers are understandably reluctant to go through the time and trouble of implementing such requests.

Sometimes there is a contradiction between one's tax planning and one's social security planning. For example, under SSI you might want to maximize your blind work expenses (BWE's) by making the largest monthly payment on your equipment that you could. Increasing your cash flow might help do that. But, if you increase your cash flow by cutting or eliminating the amount of taxes withheld, then you are losing the BWE value of those taxes. Again, it's just a question of doing the arithmetic. You'll never make the right decision to the penny. Just sit down and figure it out as best you can.

(e) Interest

Under former law all interest paid by a taxpayer was deductible. The new law severely restricts the deductibility of most kinds of interest. In 1987, interest paid on consumer goods will be only 65% deductible; in 1988 only 40%; and within four years it will be zero. Although it appears that there will be no exception made for interest incurred in the purchase of health care items, some time will be required to determine how broadly IRS interprets these new limitations.

One area where there are exceptions is that of home equity loans or second mortgages, as they used to be called. As mentioned in Chapter V, these are becoming more popular, largely because the interest on them will remain fully deductible, provided the amount borrowed is no greater than the homeowner's actual investment in the property. But when the loan is for the purpose of meeting educational or health care costs, the interest will continue to be deductible, even if the amount borrowed is greater than the homeowner's equity. (124) People who are planning to borrow money for an education, including money for necessary equipment, should keep this in mind.

(f) Other Tax Considerations

State Taxes: A prospective equipment user should always inquire into state tax law. Even if the item is not deductible federally, it may qualify for some special treatment under state income tax law. A number of states have recently been considering various disability-related tax credit schemes, principally in the area of creating incentives to hiring. Such provisions are likely to emerge over the coming years, and their applicability should be assessed.

The possibility of avoiding state sales tax should also be considered. Under state law, sales tax exemptions may be available to tax exempt purchasers or on other bases. Since the Tax Reform Act repeals the deductibility of state sales taxes, avoidance of these taxes becomes all the more desirable. Depending on your state law and the law of the state where you make the purchase, buying equipment outside of your own state may represent a perfectly legal way of avoiding sales tax. This is especially common where a purchase is made out of state by mail-order. This should not be done if lack of a local vendor would pose technical support or maintenance risks. As discussed in Chapter IX, nonprofit agencies are generally exempt from the payment of state sales tax as well.

Individual Retirement Accounts and Pension Funds: Normally, any attempt to withdraw funds from an IRA or pension plan prior to age 59-1/2 will result, not merely in taxation

of the funds withdrawn, but also in a tax penalty. The needs of newly disabled persons may represent one of the few exceptions to this rule. Basically, if one withdraws money from such a plan to pay medical expenses which exceed the 7.5% threshold, this withdrawal will not be subject to a penalty. It will be taxed as ordinary income in the year of its withdrawal. Also, one need not itemize to take advantage of this exception. (125) Where one has an IRA but needs equipment, this possible source of capital ought to be reviewed with a knowledgeable tax adviser.

Apart from disability exceptions to the early withdrawal penalty, there are also provisions allowing people to borrow from their IRA's for short periods of time without tax penalties. Such a loan to oneself may be worth considering, where coming up with a downpayment is the problem.

Amended Returns: If reading this chapter reveals tax savings opportunities that you overlooked in the past, there may be a way of recapturing some of the funds to which you're entitled. Taxpayers may file amended returns for up to three years after the tax return to be amended was originally filed. Low-income wage earners who have struggled to get some but not all the equipment they need should give this possibility special attention.

Taxpayers who need forms and tax tables for previous years can request them from the IRS. Also, the two or three best-sellers that come out each year in the tax field can usually be found in a library. Each year one would do well to keep up with the major changes and issues by consulting one or another of these books.

Then **Casualty Losses:** No one likes to think of harm befalling their hard-won equipment, but misfortunes can occur. It may therefore be of some consolation to know that if equipment is stolen or lost, a tax deduction for some part of the loss may be available under the casualty loss provisions of the law. There are both thresholds and upper limits with this deduction, but its availability does not depend on the item's having been pur-

chased for business or employment. If theft is involved, the matter should be reported to local police.

Insurance represents the best form of protection against equipment loss or damage. For those whose employers maintain insurance protection on office property, it may often be possible to include adaptive equipment under the employer's coverage, particularly where the equipment, though owned by the employee, is kept at the workplace. Such coverage may or may not involve some small cost in insurance premiums, but this cost is likely to be far less than the equipment user would have to incur in obtaining individual insurance.

Targeted Jobs Tax Credit: The targeted jobs credit (or TJTC as it is commonly known) was restored to the law by the Tax Reform Act, after having expired on December 31, 1985. (126) The credit has been restructured in several important ways, but it continues to be available for many blind persons entering private, for-profit sector employment. As such, the TJTC represents a valuable subsidy to employers who hire members of target groups.

TJTC relates to equipment in one very practical way. To the degree that it provides a tax advantage to employers, it is not unreasonable to hope that the value of that subsidy would be taken into account by the employer in determining how much to contribute toward the cost of equipment. For example, if an employer were willing to put in \$1,000 without regard to the credit, the real cost of that investment by the employer is actually reduced by the value of the credit. Reasonable employers may be willing to share the value of the credit with blind hirees whose employment depends upon equipment.

Several other points should be made about TJTC. It has been reauthorized only through the end of 1988. The credit is now available only for "qualified" first year wages, rather than for some second year wages, as had been the case. Finally, a TJTC of up to 85% of "qualifying wages" is available to target group members in summer youth employment programs.

Chapter VII

The Education System

Among the changes in our educational system over the past decade, introduction of computers into the classroom is one of the most profound. Computers have been used in two basic ways. They have been used as teaching tools in connection with an ever-widening range of school subjects. They have also become an element of the school curriculum in their own right. This is based largely on the belief that computer literacy is indispensable to success in the modern world. In this light, it is not surprising that special education has played such a prominent role in the discussion of technology for disabled people.

When we speak of the educational system, we confront a broad spectrum of environments. These include preschool, elementary, secondary, vocational and postsecondary educational settings. They include residential and day facilities, public and private institutions. Similarly, when we speak of technology in the education of blind and disabled people, we are also talking about two systems: the overall educational system of this country, and the special education system that has developed to meet the needs of disabled students. Finally, when

we speak of special education, we usually refer to the services and programs provided under the Education for All Handicapped Children Act of 1975 (127) (Public Law or P.L. 94-142 as it is commonly called). Specialized services for blind children in the public schools of our nation long predate, and still substantially overlap, this federal program.

Against this background, any effort to think about computers in the education of visually handicapped students begins with two questions: What is the proper role of such technology in the educational process, and what are the sources through which it can be made available? Put another way, our question is how can the resources of the general education system and of special education best be combined to maximize the availability and the effective utilization of technology in the educational process?

In addressing these questions, it may be important to note that school systems throughout this nation already spend large sums on technology of various sorts for use in the classroom. Increasingly, this includes expenditures for the purchase of computers and educational software. Where a visually impaired student participates, as growing proportions seem to be doing, in mainstream educational programs, access to the equipment that is already there becomes the most cost effective acquisition strategy.

Blind elementary and secondary school students confront these access and acquisition issues in three distinct environments. The majority of these students are "mainstreamed" in public school settings, but these will vary in many ways. For technology, one of the most important of these differences is whether the student is isolated (that is, in a school setting without other visually handicapped students), or whether the student attends a school in which there are a number of visually handicapped students, such as exist in many larger cities. In the former case, technology decisions will tend to be individualized, while in the latter they will be more uniform.

Blind students who are mainstreamed in public schools

which have resource rooms (braille or sight conservation classes, as they used to be called) are increasingly likely to have some contact with technology in their formative years. But the level of exposure, the degree of training and the extent of technology's integration into daily schoolwork will vary considerably.

A third group of blind students, including many of those with severe multiple handicaps, attend state residential schools for the blind, or other institutions specifically designed for handicapped students. In these primarily residential settings exposure to computers is also increasingly likely to occur. But depending on the philosophy and resources of each school, there may be vast differences in the ways that technology is used, and in the extent of its incorporation into curriculum and consciousness.

Special education services are available on the basis of need to students in every kind of educational setting. A brief overview of the special education system may therefore be useful at this point. This can be done most clearly by comparing special education to vocational rehabilitation. As with VR, states qualify for the receipt of P.L. 94-142 funds by filing program plans that comply with federal requirements. (128) Like the state plans under VR, these educational program plans must include certifications, commitments and guarantees in a wide variety of substantive and procedural areas. Where the relationship between the VR agency and the individual client is structured by the IWRP, the content and objectives of special education services are articulated in the Individualized Education Program (the IEP). (129)

As much as special education parallels VR in these broad outlines, it also differs from it in many critical ways. As noted above, perhaps the most important of these is that special education is only a small part of a larger, predominantly state-based educational system. It is arguable that there would be no systematic program of rehabilitation for blind adults in the absence of the federal VR program. Blind children would still be

receiving some sort of education in one or another setting were the federal special education program to disappear.

This distinction has two important implications. First, it suggests that education, as a system involving both state and local agencies, is inherently more complex and often more difficult to negotiate than VR. On the other hand, it also suggests that education is organically tied to the life of the community in ways that rehabilitation never will be.

In matters of equipment, as in all other issues pertaining to the education of their blind children, parents have an important role to play. They are supposed to participate in the IEP process, and parental concurrence in the formulation of these plans and in their periodic review is required under the federal program. Whether such participation is meaningful depends of course on many factors, including the attitude and resources of local education officials, the skill and commitment of teachers and the aspirations of the students. But another critically important factor is the level of participation that the parent deems appropriate.

Throughout society, energetic parental advocacy plays a key role in the quality of education received by their children. In matters of special education, where resources are limited and official expectations often low, this is even more the case. Only if parents truly believe in the potential of their visually handicapped children to grow into full members of society can they play this role effectively. Even without lucrative football or basketball scholarships to their choice of universities, education is available. Whatever may be the value that society as a whole places on education today, it remains for blind children the most important source of opportunity, and indeed the most accessible social institution that we have.

For parents, teachers and educational policymakers, the question of technology has some urgency. An understanding of this urgency takes us back to the questions posed above. If technology and computer literacy continue to grow in importance within the educational process, it is essential that visu-

ally handicapped students be assured of access and opportunity equal to that of their sighted peers. If the computer literacy which is increasingly the hallmark of an educated person is denied to blind students in their formative years, yet another crushing burden will be borne in the form of deficits that will not easily be overcome. All of us, whether we are parents or not, owe a debt to the future to make certain that this does not occur.

The special education technology needs of elementary and secondary school students, whether they are placed in mainstream or specialized settings, continue to pose a perplexing problem. To a certain degree, these students and their needs have fallen between the cracks.

To accommodate the vocational planning and transitional services needs of students, a number of state VR agencies have reduced the minimum eligibility age, typically from sixteen to fourteen. In some states, children's services units have been established within the blindness agency. The extent to which such outreach will contribute to the provision of equipment for individual students is not yet clear. If one lives in a state where such a children's services unit exists, its full potential to be of help in marshalling technology should be explored. In a few states, the role of such children's services units will include the provision of at least some educational technology. In the majority, it will not, but even in these, the capacity of the blindness agency to provide training or other backup services should be fully explored. As with any other governmental program, one should not accept vague or general denials, but should insist upon reading the regulations or statutes that support the denial, and upon definitive interpretations of all ambiguities or possible loopholes.

Supplemental Security Income recipients can in some instances seek approval of a Plan to Achieve Self-Support to facilitate accrual of resources to meet equipment costs. But this approach would only be viable for secondary school students, and then, only if they are participating in vocationally-orient-

ed coursework demonstrating a close enough connection between the equipment to be purchased and the self-support goal to be achieved. Taken together, these resources obviously do not constitute an adequate answer to the problem.

Beyond state blindness agencies and SSA, the education system itself does have pertinent features. In educational settings, perhaps more than anywhere else, use of equipment rather than its long-term possession or ownership, emerges as the most appropriate strategy. This is particularly so, as noted above, because public school systems and residential schools are making increased use of computer technology in their instructional programs. Where there are concentrations of blind students, either in public school resource room settings or in private or residential institutions, the probability is growing that at least rudimentary magnification and computer access equipment will be found.

In these settings, as in mainstream public school settings, the real problem may be one of affording adequate resources for hands-on experience, appropriate training and full integration of computer use into the instructional curriculum. Whether or not the presence of an accessible computer in the school will meet a student's needs largely depends upon how these issues are addressed.

For isolated blind students, the issues surrounding equipment acquisition may prove as difficult as those concerning meaningful access. These students will frequently receive special education support from an itinerant teacher. For these isolated students, the availability of technology is likely to represent a much more individualized assessment, reflecting the knowledge and commitment of the regular and special education personnel involved, and hinging to a large degree on their ability to work together effectively.

In well-to-do public school districts, purchase of equipment for a single blind student does not usually represent a major obstacle, though the district may understandably wish to retain ownership of the items once the student leaves the school.

But in poorer districts, or districts where the presence of a large special education population gives rise to fears of establishing a costly precedent, this approach may not be possible. In such districts, approaching technology from the standpoint of add-ons to what already exists for the general student population may represent the best strategy. If the school district already uses computers, adaptive software and speech or large-print output peripherals are likely to be available at moderate cost. Although the per capita cost of these add-ons will probably continue to exceed those for the general student population, the difference may be surprisingly small.

School districts can often benefit from discounts or subsidized pricing in their purchase of computer equipment. To the extent that their hardware choices can be applicable to blind as well as sighted students, special education costs are likewise reduced. Accordingly, parents and teachers should make every effort to ensure that when local school officials are planning computer purchases, the accessibility of the devices chosen is taken into account. With the continued prevalence of Apple computers in the schools, this may often be possible. A great deal of adaptive educational software continues to be available for use with the Apple II series of machines.

The desirability of blind and sighted students using the same equipment, so far as possible, derives as much from educational as from budgetary considerations. But if careful attention is not paid to adequate training and hands-on access, both instructional and fiscal goals may be poorly served. For this reason, it is important to emphasize that in the selection of technology and in the implementation of training, the role of special education resources can prove critically important.

Approximately 32 states operate instructional resource centers for visually handicapped students. (130) These centers operate under a number of state-wide and regional models, utilizing various combinations of P.L. 94-142 funds and state resources. In some states, such as Pennsylvania, these programs include the capacity to lend equipment to

students on a long-term basis. (131) In the majority of states, these resource centers (or comparable entities) maintain repositories of low-tech aids and devices, and braille and large-print media.

The Education for All Handicapped Children Act derives its relevance from the obligation it imposes upon states to provide a "free and appropriate" public education to handicapped students "in the least restrictive environment." This requirement embodies the concept of mainstreaming, and it is perhaps not surprising that the majority of disputes that courts have had to resolve under this law involve questions of where particular students should be "placed."

As noted above, P.L. 94-142 also individualizes the educational process through the medium of the Individualized Education Program (IEP) which must be implemented, with parental concurrence, for all severely handicapped students. Finally, the Act mandates the provision of both "special education" and "related services," where they are essential to enabling the child to meet IEP goals. (132)

When parents understand and actively participate in the IEP process, it can play a decisive role. This potential exists whether equipment is being sought with 94-142 or with state education funds. The difficulty that many students face, though, is that adaptive technology does not fall squarely within the definitions of either "special education" or "related services."

The definition of related services, while still in flux, does not appear to require the provision of adaptive technology of the sort blind and visually impaired students would typically need to perform well in school or to gain the computer literacy thought so essential to effective competition in the modern world. This is so for a number of reasons, and it is so even where technology would improve educational performance. The reason why can be gleaned from court decisions interpreting the Act which make it clear that the law does not require special education students to receive the best possible

education, but only an adequate one. Obviously, though no court has ever said so, blind people can be educated without computers, at least to the degree that society regards as appropriate, and at least until this technology becomes a routine feature of every classroom in America.

The distinction between an adequate education and the best possible education, as well as the differences between special education services and related services, can be graphically illustrated by comparing two landmark court decisions. In one case, the courts decided that a deaf student was not entitled to the services of a full-time interpreter at school district expense. The student was able to attend school and to function adequately without one. In the other case, the courts ruled that a school district was obligated to provide catheterization to a physically disabled child, because without this the child would have been unable to attend school. In the cases of both special education services and related ~~services~~ ^{services}, it is precisely this question of "services" that is at issue. It may be a question of year-round versus ten month education; it may be a question of remedial or tutorial services provided by specialized personnel; it may be a question of sign language interpreter services or of catheterization services from a school nurse. Unfortunately, a computer is not a service, but the training and support necessary to ensure its effective use may very well be, depending on the contents of the student's IEP.

Notwithstanding this lack of legal compulsion, a persuasive argument for closed-circuit television magnifiers or for computers can often be made, when it is shown that such items would be instrumental to achieving IEP goals. For this reason, it is especially important for parents and students themselves to consider the possible role of sensory aids at the time IEP's are made and when they are periodically reviewed. Given the opportunity which the IEP process offers to parents, the role of the family in identifying and obtaining useful technology should be regarded as important steps in the process.

Specifically, what is required to do this is a careful

assessment of how technology could contribute to each of the intermediate or long-term goals set forth in the IEP. Ideally, the IEP should include goals to which technology is more or less indispensable. Obviously, if improved behavior were a major IEP goal for the forthcoming school year, it would be relatively difficult to demonstrate that some piece of hardware or software was essential to its achievement. But if the goal were improved reading speed or greater reading comprehension, then the argument for closed-circuit TV magnification or electronic braille may be a good deal more compelling.

Getting technology into the IEP does not ensure its subsequent provision, but its inclusion does represent an invaluable starting point for mobilizing the resources necessary for obtaining it. To the degree that a case can be made for linking technology to IEP goals, even the failure to achieve previously agreed upon program goals can strengthen the case for equipment in the following year's review of the plan.

In those cases where it is agreed in principle that specific hardware or software need to be purchased, the inability of hard-pressed school systems to do so may nevertheless represent a barrier to acquisition. In such situations state special education resources may also represent appropriate sources for the necessary financing. A detailed discussion of the funding categories and educational priorities established under 94-142 is beyond the scope of this guide. For parents and educators interested in fully understanding the Act and in pursuing the advocacy opportunities that it provides, a number of in-depth resources do exist. (133) Because each state is required to designate an agency which will be responsible for administering its special education program, the identity of key officials should not be difficult to ascertain.

Because states generally maintain control over public education, state special education programs vary enormously. Successful models for technology utilization do exist. For example, a Virginia program is said to have provided

VersaBrailles and textbooks on VersaBraille cassette to a significant number of blind students. Parents, teachers and administrators should always be alert to the substance of state education laws, as they bear upon technology and related support services, and as they bear upon educational rights which may incorporate higher standards than apply at the federal level. Beyond the requirements of the EAHCA, some jurisdictions have enacted stronger statutes under which equipment can be justified.

P.L. 94-142 is not the only source of relevant federal education funding. There are a number of federal programs from which money to meet the needs of special education or disadvantaged students can be drawn. One interesting example are the funds made available under Public Law 89-313 for students who transfer from state residential schools to mainstream public school settings. School system administrators and local education advocates should always be consulted to ensure that every available source of funds has been thoroughly investigated.

As suggested by reference earlier in this chapter to court decisions which illustrate an important point about special education, lawyers and litigation have played a larger role in this area than they have in VR. While it would be foolish to expect speedy results through recourse to legal action, the scope and complexity of educational rights under special education programs are considerable. There are many cases in which consulting an attorney, or in which having an attorney to press an administrative appeal from a denial of necessary technology, may prove useful. In this connection, parents should remember that if their claims ultimately prevail, it may often prove possible to obtain some reimbursement for legal fees from the educational agencies involved. Also, though the resources are by no means adequate, it is probably correct to say that legal assistance from grass roots educational advocacy groups is more readily available than would be the case for disputes with VR.

When it comes to higher education, there is no special education framework. Also, as the costs of college soar, equipment for postsecondary education is only one part of a larger funding problem. In reviewing all sources of educational funding, blind and visually impaired students must be alert to this point. It means that they will sometimes be looking for equipment, and other times simply for the money to buy it.

State commissions for the blind may in some instances agree to pay for tuition or other specified postsecondary educational costs, but may restrict or deny funding for equipment. In such cases it should be remembered that the VR system is not the only source of assistance for disabled college students. Readers funds are, for instance, often administered by other state agencies, and it is worth finding out whether all or any portion of the sums available for that purpose can be used to purchase equipment. Generally speaking, financial assistance which is not provided on a restricted basis can be used to meet all legitimate educational needs, including the cost of equipment. In calculating their school cost, equipment is therefore a need which college and graduate students should take fully into account.

Although legal requirements for the provision of "reasonable accommodations" by universities have been severely watered-down in recent years, many schools still appear to take such matters quite seriously. Disabled students' services, as summarized in a recent directory, (134) are well established and widespread throughout this country, and include equipment access in a number of schools.

The concept of "reasonable accommodations" is not synonymous with equipment, but the choice of school may have a great deal to do with what equipment is available and how effectively it can be utilized. Some college libraries contain Kurzweil Reading Machines. Universities vary in their policies regarding student access to their computer centers and in the range of equipment that students may use. Other schools, particularly those which require each student to own a com-

puter, will consider this need in any grant of financial aid to a student. At still other institutions, especially large state universities where a number of visually impaired students are enrolled, it may be possible for consumer groups to spearhead the installation of equipment for shared use, as reported in Louisiana several years ago. Investigation and imagination will yield other models as well. In this connection, the University of California system is said to have been active in working toward accessibility of its computerized library resources to blind students, and a demonstration project to achieve this goal at 23 of that state's community colleges has recently been reported.

What is of concern here is the possibility of selecting a school which has accessible equipment and resources among its facilities. To the extent that one can do so, consistent with traditional preference factors, the costs of needed educational technology may be substantially reduced. This seems to be increasingly possible, especially at public colleges, as more and more college libraries possess close-circuit TV magnifiers, or other devices. The overall trend toward computerization of library resources is likely to add further momentum to this process. While library computerization is not likely to have a dramatic impact upon the way visually handicapped students do their written work, its significance for reducing the costs of reading and research may be sufficiently great as to free-up funds for the purchase of needed technology, in some cases.

In those cases where a college student requires cash for the purchase of equipment, sources of financial aid, over and above tuition and fees, should be evaluated. Here, all the sources of assistance that are applicable to students at large are relevant. The Higher Education and the Handicapped (HEATH) project has gathered a number of very interesting resources on financial aid for disabled students. (135) The National Scholarship Research Service (136) also maintains a computerized database which includes extensive resources designed to meet such school aid needs.

The key point here is that if one can raise funds through grants or loans which exceed one's fixed tuition and living costs, there is ordinarily no obstacle to using these funds for equipment. Such leeway may often exist under the federal Guaranteed Student Loan (GSL) program and it may exist under other aid programs. How explicit one will choose to be in specifying that the money will be used for equipment depends on the nature of the loan or grant program in question.

In calculating how much money will be needed for college, it is important to remember that equipment can influence other costs. Ideally, equipment will lower costs by reducing the amounts that must be budgeted for readers, proofreaders and the like. If the equipment allows one to get a work study or other part-time job, it can even generate income. But there are times when equipment can raise other costs too. If one is going to connect to a university mainframe or database, there may be an increased telephone bill. If one is going to do a lot of writing, there may be endless paper and ribbons. And if one needs a little expert assistance with installation or maintenance, this may or may not be obtainable on a voluntary basis from within the university community.

For blind postsecondary students who are receiving SSI, the PASS (Chapter 4 {b}) may be more readily available than it would be for high school students. In such a case, the PASS should be utilized to shelter both resources and school aid from countability, so that they can be saved-up for use in the acquisition of equipment. In addition to the usual problem of establishing a sufficiently tight connection between one's self-support goals and the educational technology, this effort raises another question. In many instances, the technology that is needed for education will differ from that which will eventually be required for work. But this is a risk which in the main is worth running, and which applies to most students whether blind or sighted, who manage to go to school on tight budgets.

In this connection, it may be worth noting as a final point that the overall pattern of educational funding in this country

is changing. In the coming years, loans seem likely to more and more replace grants as sources of educational assistance. While this trend has already fostered an increasing burden of debt for recent graduates attempting to establish families and embark upon careers, its implications for blind equipment seekers are not wholly negative. On balance, educational loans are likely to be more available to these citizens than other kinds of credit have been, and it is likely that more flexibility will exist in their use than is the case either with categorical grants or third-party payments of designated costs. Even in debt there may be a perverse pleasure, if it reflects the shared social experience of this generation.

Chapter VIII

Miscellaneous Sources and Special Situations

(a) Insurance

The insurance system of this country includes private and public coverage. Both systems of insurance have played a disappointingly small role in the provision of adaptive sensory aids for work and life to blind and disabled people. Although the prospects for greater availability through this source seem limited in the near term, some possibilities for the acquisition of equipment through insurance do exist.

Private Health Insurance: Most workers in primary sector employment in this country are covered by group health insurance provided by their employers. Additional numbers of part-time, marginally employed, self-employed and not-employed persons maintain privately purchased individual coverage or are covered under someone else's policy. Many Americans lack health insurance of any kind.

Private insurance policies vary widely in their scope of coverage. On balance, the scope of coverage has tended to expand over the years as new forms of medical treatment and new categories of health-service providers have gained recognition.

Nevertheless, these changes have not helped blind and visually impaired people as much as they have helped some other disability groups. Among the factors accounting for the failure of most individual or group insurance policies to cover sensory or low-vision aids are these: Adaptive sensory aids technology has developed largely outside the medical care system and has not involved the emerging rehabilitation medicine field to any significant degree. Insurers and state insurance regulators have little familiarity with the practical needs of a low incidence population such as this. Low-vision services (and even eyeglasses) are excluded from coverage under many policies. Electronic low-vision and sensory aids are regarded as primarily rehabilitative or social in nature, rather than medically necessary.

This does not mean that blind and visually impaired people have never succeeded in securing insurance reimbursement or insurance company purchase of technical aids. The most prominent examples of success occur under employer-sponsored policies which include long-term income replacement for those disabled from work. Almost without regard to the literal provisions of a policy, insurers will consider the costs of technology to be a bargain as compared to the cost of long-term support. If the employer-policyholder (who also has a financial interest in the worker's return) wishes that such equipment be bought, it ordinarily will be. This likelihood of course grows larger as the size of the firm involved increases.

The opportunity to return to work with equipment may not be an unmixed blessing, however. Instances are known in which employers have put visually disabled persons back to work with insurance-funded equipment, but then fired them outright when they proved unable to perform their assigned tasks. State commissions for the blind, who in many instances play a role in certifying an individual as rehabilitated and able to return to work, have sometimes been unwitting accomplices in these tragedies. A thorough job analysis must be conducted before the blind worker is certified as no longer dis-

abled. Adequate provision must also be made for on-site training and for sufficient time to adjust to performance of work with the equipment. These measures are indispensable, lest evaluations that could determine the "rehabilitated" worker's future be conducted prematurely. In some of these cases the user has at least been allowed to keep the equipment.

For their own part, many health insurance carriers have begun to actively pursue rehabilitation, through in-house programs and linkages with the state and private rehabilitation sectors. Where a return to work is not feasible, the situation remains less promising. Coverage of low-vision technology is spotty at best, (137) but when it comes to computer or other systems for use by totally blind individuals, coverage through standard policies is virtually nonexistent.

An individual must review the policy to determine whether the desired equipment can be incorporated under any of the services it does provide. Policy language, interpretive precedents and state insurance regulations may all be critical here. If the equipment, either by its nature or through its intended use, appears to fit within any of the dimensions of coverage, a plausible argument can sometimes be made.

An example of these factors would be whether the policy includes any coverage for prosthetic devices, and if so, how state law defines them. After all, wheelchairs are no more attached to users' bodies than vision aids are, but they are frequently covered as medical devices to restore the bodily function of movement. An additional factor to be considered is whether the sensory aid in question can be prescribed as treatment for a covered disease. If so, a third factor to be considered would be the existence of a licensed health care professional whose prescription an insurer will ordinarily accept. One of the reasons that wheelchairs have an advantage over CCTV's is that doctors know about them. In a case where a suitable equipment prescriber is available, attention would next be directed to the kinds of treatment that the policy covers.

A fourth factor to be considered by the policyholder is the

question of what equipment has been provided by the insurer under that policy in the past. This question shades over into state law. If an insurer has provided hearing aids or mobility aids, it may be improper for that insurer to refuse to provide visual aids. If the policy has been construed to allow for the provision of artificial limbs to persons suffering from diabetic neuropathy, then the case for sensory aids on behalf of someone beset with retinopathy from the same underlying diabetic cause likewise becomes that much stronger. As noted above, state law may also be pertinent to the definition of prosthetic devices.

Outside the context of return to work, three cases are known to me in which health insurers have provided sensory aids to visually handicapped persons. In all these cases, electronic visual aids have been involved. It is an interesting measure of the state of things that in each case the insurer required that the recipient, the recipient's attorney, and the equipment supplier keep the settlement confidential. For individuals who are trying to obtain electronic visual aids through health insurance, it would probably be useful to get in touch with the manufacturer to find out if any precedents for insurance company purchase exist. Pledges of confidentiality would prevent manufacturers from responding to such inquiries only in those cases, such as the three noted above, where the decision to provide the ^{equipment} ~~equipment~~ was based on factors other than the terms of the policy.

A final consideration in this area would be the timing of one's vision loss. Most insurance policies exclude coverage of "pre-existing conditions." That is, if the vision loss occurred before one obtained the insurance coverage, it would be unreasonable to ask an insurance company to pay for compensatory technology. Two points must be borne in mind about this, though. First, a number of the pre-existing condition clauses are applicable only for a specified period of time, so that after a year or some other definite period, you may be able to make a claim based on the pre-existing

condition. Second, blindness is not a disease at all. It is a status, like being short or tall. For this reason, attention to the underlying cause of the blindness may prove important, particularly in those cases where vision loss is progressive.

Federal Medical Assistance Programs: A naive citizen once asked a state Medicaid official why wheelchairs were routinely provided to enable paralyzed persons to move about, while closed-circuit televisions were unavailable to assist partially sighted persons to read. "Because," the bureaucrat replied, "you don't need to read in order to be healthy."

Medicare is the federal insurance program for persons receiving old-age assistance or disability insurance payments under the Social Security Act. (138) Medicaid is the program of medical assistance to the needy, including those blind persons whose eligibility is automatically conferred by receipt of SSI. (139) The two programs differ in important ways. Perhaps most important among these is that Medicare is administered by the federal government through regional contractors with little or no differentiation from state to state, while Medicaid funds are administered and distributed by the states in a manner very reminiscent of VR.

Although the federal statutes and regulations governing these programs do not explicitly exclude adaptive sensory aids technology from coverage, various provisions of the law have combined to bring about this result. Legislation has been introduced in each of the last two Congresses to add "sensory and communication" aids for visually, hearing and vocally impaired persons. (140) But despite substantial evidence for the cost effectiveness of such measures, and despite heartrending congressional testimony about people who actually died for lack of vocal communication aids, (141) the outlook for this legislation remains poor. Ironically, the introduction of such legislation has tended to confirm the impression that such aids are barred under both programs, which, strictly speaking, is not the case.

There is little point in devoting space to sources that are al-

most completely unavailing. But some indication of the precise nature of the problem may be of value in suggesting possible directions for reform.

Under Medicare, the only equipment that can be provided to a patient is what the statute defines as "durable medical equipment." (142) The illustrations of such equipment enumerated in the statute are "iron lungs, wheelchairs and oxygen tents." Though the years have witnessed some broadening of Medicare's focus through inclusion of intermediate, skilled nursing and other forms of non-physician treatment and care, the equipment definitions make clear that anything remotely resembling a rehabilitative or quality of life focus is still far outside the program's scope.

The purchasing process for these few medical equipment items that are authorized illustrates another set of administrative problems. For an equipment item to be purchased, it is necessary that it be of a specific design that has been approved for use in the program, that it have been prescribed by a practitioner who is approved for participation in the program and whose area of competency has been certified to include its prescription, and that a price have been established for the item. Even if the technology that blind and visually impaired people most often need were to be classified as durable medical equipment, these additional administrative criteria would prove impossible to meet.

When it comes to Medicaid, things are a bit more hopeful. Among the criteria which state plans must meet as conditions for the receipt of federal funds are that they provide a range of "basic services to medically needy persons." These basic services are similar to those contemplated under Medicare, but states have a surprising amount of discretion to go beyond the basic federal requirements and to do more. Where Medicaid therefore grows more interesting is in the leeway it allows the states (primarily with their own funds) to add "optional services" and to provide services to certain additional groups of people who meet expanded definitions of medical neediness.

This flexibility includes the right to utilize service providers who meet state licensing or educational requirements for various professions and disciplines. It appears, for example, that a handful of states include rehabilitation counselors as eligible providers for certain services.

Two important possibilities are suggested by this flexibility. First, in those states where optional services are available, one should carefully investigate the scope and definition of these additional services to determine if the needed equipment could be encompassed under any of them. Even if the equipment as such cannot be, the services of a practitioner who is knowledgeable in equipment or who has insight into funding strategies might still be available in this way. Second, in all states, educational and lobbying efforts on behalf of disabled groups may lead, through accessible local political processes, to further broadening of the state Medicaid plans.

The long-term importance of such efforts would lie primarily in their applicability to nonvocationally-oriented situations, and in their impact upon the poorest subgroup of the blind population. Of late, there are encouraging signs that the potential of Medicaid is receiving more attention at the state level. Several states have established task forces or study commissions to review state technology policy in relation to disability. A 1986 Minnesota report provides an excellent summary of state-based issues pertaining to Medicaid reform in the rehabilitation technology area. (143)

(b) Small Business

However it may be that the promise of self-employment as an alternative to mainstream jobs has been oversold to the disabled community, several sources of potential funding do exist for those individuals who have the temperament needed to work for themselves. It is important to remember that adaptive equipment represents only one part, and often only a small part, of the capital needs of would-be entrepreneurs. For this reason, the funding sources of particular relevance here

relate to startup costs generally, with equipment as but one component.

All the sources of finance capital that exist in our economy are available to blind people on the same basis as they are available to anyone else. But because blind people face familiar obstacles in obtaining business financing or startup loans, it is important to note the existence of several specialized sources of capital. The two primary sources of funding for blind enterprisers are the small business enterprise program administered by the state vocational rehabilitation agencies and the Small Business Administration's (SBA) Handicapped Assistance Loan (HAL-II) program.

Though now largely associated with the operation of vending facilities under the Randolph-Sheppard Act, the small business enterprise program has been used in a number of states to finance the startup of other kinds of small business. "Tools and equipment," "initial stocks and supplies," and "occupational licenses" are included among the types of support which the federal regulations permit the state VR agencies to give.

Historically, the federal definition of equipment in these situations has emphasized standard items that anyone going into the particular business might need. But where one has a business plan which is sufficient to secure state agency support for the endeavor, it is unlikely that the distinction between standard and adaptive equipment would become a serious issue. There is also no ban on the support of home businesses, though they appear to have been somewhat rare. With growing awareness of the needs of multiply handicapped blind persons, and with the growth of technology to facilitate home-based service businesses, there are indications of a revival of interest in this option.

Typically, where VR small business enterprise programs exist, they will provide a fixed proportion of startup costs. This may be expressed in terms of paying for specific items, in terms of some percentage of overall costs, or in terms of meet-

ing costs above a fixed client contribution. State criteria for choosing the types of business enterprises that will be supported, and for what constitutes a satisfactory business plan will also vary widely.

The HAL-II program can make loans or provide loan guarantees of up to \$300,000. (144) But there are several serious limitations on eligibility, including the requirement that no other source of capital be available. Moreover, the SBA is among the most vulnerable of federal programs, having endured deep budget cuts in recent years. A lengthy waiting list is also reported.

The SBA also operates the HAL-I program. This program makes loans to rehabilitation facilities, sheltered workshops and other nonprofit organizations. If one is establishing a nonprofit organization, this should be investigated as a possible source of support.

(c) Veterans Benefits

Although applicable to only a small subgroup of the blind and visually impaired population, programs operated by the Veterans Administration (VA) can subsidize the cost of a number of adaptive aids. Details on these elements of the VA program are available from several sources, including the agency itself and the Blinded Veterans Association (BVA). (145)

Since World War II, the VA has done a great deal in the field of technology for blind people. It has played a major role in technological, prosthetics and human factors research, and it has provided equipment to veterans for many years. Today, the VA's equipment program is in transition, as indeed are all the agency's services. As of this writing, it is, for example, not known whether recent federal legislation will result in the imposition of means-testing or of client co-payment requirements under the blind rehabilitation services program.

At present, jurisdiction over adaptive technology appears to be divided among several of the VA's organizational units. Some equipment, primarily large items that have been

specifically approved for purchase, is provided through the agency's four regional Blind Rehabilitation Centers. These centers are located in ^{West Haven} West Haven, Connecticut; Hines, Illinois; Palo Alto, California, and Montgomery*, Alabama. Among other things, these centers evaluate equipment for VA purchase, provide training and assess client competency in the equipment's use.

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Subject to their limited resources, these centers can also provide training on equipment that they do not distribute. Although all veterans are entitled to some degree of service, "service-connected" blind veterans naturally receive a priority in this area. (146)

Local VA units also have authority to provide equipment in certain circumstances. Depending on need and justification, it seems that a fairly broad range of devices can be provided in this way. Outside resources will usually have to be marshalled for training or set-up assistance in the cases of such local provision. It is difficult to speak with confidence about the degree of variation or the level of responsiveness in local practice, but anecdotal reports indicate that these are substantial.

A veteran who wants to seek technology assistance through the VA should work from the ground up. Among the sources to be consulted for information and guidance are: local VA staff, local counselors, the blind rehab centers, the BVA, and other disabled veterans groups.

(d) State Crime Victims Compensation

At least one case has been reported in which an individual whose sight loss emanated from an assault was able to secure a computer system as part of a compensation award. In the case in question, the components, which the victim was allowed to select, were provided in lieu of monetary recompense, but the categories and amounts of compensation, as well as the rationale for awards, will vary greatly from state to state.

Under the various compensation methods that states use, there are likely to be cases in which the request for appropriate technology to compensate for vision loss would result in in-

creasing the total value of the compensation award. If one's vision loss derives from such causes, and if the state has such a program, this source should be investigated.

(e) Workers Compensation

In recent years, many state workers compensation programs have begun to develop rehabilitation capabilities. If one's blindness derives from work-related illness or injury, the extent of the state's rehabilitation program should be explored.

Again, the pattern reflects too much diversity to admit of easy generalization, but a number of states have begun to include assistive devices in the range of services that are covered. Some worker compensation boards work closely with their state vocational rehabilitation agencies. Some have made use of for-profit rehabilitation companies. If the latter are used, it is important to ensure that the organization has appropriate experience with the technological possibilities for visually impaired clients.

(f) Service Clubs And Civic Organizations

Best known for a wide range of activities on behalf of blind people are the Lions Clubs. Both on a national and a local level, a number of other service and fraternal/sororal organizations have also regarded this population as appropriate objects for their community service work. The nature of these efforts is not constant, but, if all else fails, the range of community service commitments among such organizations in one's community should be explored. A substantial number of instances have occurred in which local chapters of such service organizations have taken it upon themselves to finance needed technology for blind individuals. Such organizations have also been known to help schools obtain adaptive technology for blind students.

Several cases have been reported in which members of the highly regarded Telephone Pioneers organization, best known for its Talking Book repair work, have made their services available in assembling items of computer equipment from kits or schematics. This can result in significant savings.

Opportunities of this kind are likely to become more numerous in the future, as new adaptive devices are marketed in kit form.

(g) Charitable Foundations

Most private foundations and charitable trusts do not make grants to individuals, but a few do. To the degree that education and disability represent the primary areas of giving for a large number of foundations, opportunities may nevertheless exist through nonprofit intermediaries or school systems.

Where foundations do give money to individuals, education is the most common purpose, followed by medical care and the alleviation of destitution. For those seeking information on available grants, the Handicapped Funding Directory and the various indexes maintained by the Foundation Center library should be consulted. (147) Corporate foundations should not be overlooked in the search, especially if one has family members who have been affiliated with the company in question.

Two grant programs deserving of mention here are those of Associated Services for the Blind (ASB) (148) and Opportunities for the Blind. ASB subsidizes up to 50% of the cost of certain items. They have been primarily associated with the provision of such devices as the VersaBraille and the Optacon, and have provided training to recipients of their subsidies. Opportunities for the Blind makes grants to blind people, including grants for equipment. Both programs utilize application criteria reflecting their resources and priorities.

(h) Employers

Generally speaking, there is no legal requirement for employers to provide adaptive technology for blind hirees or even for their established blind workers. State and federal antidiscrimination laws, even where requiring "reasonable accommodations" or "affirmative action," will not necessarily be interpreted to define technology as the only means for meeting these obligations. Apart from the legalities, blind and visually impaired applicants and workers are often and understandably reluctant to request equipment from their employers.

Yet there are a few points that should be made for those blind employees who wish to consider the possibility, or whose employers, as an encouraging number have done, recognize the utility of making purchases that will facilitate the hiring and productive participation of blind employees. First, because such purchases will routinely be tax deductible to the for-profit employer, the situation is no different from that of work equipment normally provided for other employees. Second, in larger firms where various machines are purchased frequently or in high volume, the per employee cost of adaptive equipment is probably little in excess of that incurred in connection with other workers. This is especially so where an existing computer can serve as the basis for the system.

Ownership of employer-purchased equipment can sometimes be an issue. In those cases where the employer does not wish to retain the equipment should the blind employee leave, or should the employer wish to avoid payment obligation for it, numerous options for employer-assisted user purchase can be brought into play. Whether the employee will want to own the equipment depends on a number of factors, but for those persons with career expectations in the organization, it should generally not be necessary.

With the reintroduction of the Targeted Jobs Tax Credit (TJTC) discussed in Chapter VI, the economic balance swings in favor of employer support for adaptive technology. Situations can easily be foreseen in which the tax savings attributable to the credit will nearly equal or even exceed the cost of the equipment. Job applicants should not assume that prospective employers, especially in smaller firms, are familiar with TJTC. On the other hand, blind job applicants can be forgiven if they feel that mention of TJTC would psychologically undermine their claims of, or their demands for, equality.

Of course, tax deductibility of equipment has no applicability to a public or nonprofit sector employer. But even though these employers pay no taxes, there are other inducements for providing technology. In public sector

positions, for example, state affirmative action or equal opportunity policies may create incentives, or the unpleasantness surrounding dismissal of an allegedly unproductive worker may make equipment provision the path of least resistance. If an established employee approaches a public sector employer for equipment near the end of the fiscal year, the request may actually be of great service to the agency. This will be so if it spares the agency the embarrassment of having to end the year with any of its funds unspent. Visually impaired civil servants faced with the need of strategizing an approach to their employers would also do well to contact other disabled government employees for precedents and tips.

(i) Deaf-Blind Persons

Deaf-blind persons should evaluate sources of technology that exist within the deafness services sector. These differ from those available to blind persons, and, for several reasons, are a bit more numerous. One of the most interesting of these is represented by a California program in which local telephone companies provide telecommunications equipment for the deaf at little or no cost. This program is funded through a small surcharge on all telephone bills and is supervised by the state's public utility regulating agency. (149)

There seems no reason why telecommunication devices, such as the TeleBraille, designed for blind-deaf users should not be available under such a program. The California program has recently been broadened to include persons with other physical disabilities, and several other states are developing telephone access equipment programs for deaf persons.

What is attractive about such programs is that, short of general tax revenues, they represent the broadest funding base for adaptive technology that has yet been devised. For only pennies a month, which most telephone users do not mind paying, important communication needs of a disabled subgroup can be better met.

Like most multi-handicapped blind people, the needs of deaf-blind persons tend to slip between the cracks, falling

clearly into no one service system. As frustrating as this often is, it can also cut two ways. If one exists on the cusp, it should often be possible to draw upon the technology resources of both the blindness and the deafness system.

(j) None of the Above

Several months ago, while giving a talk on equipment financing to a New York-area computer users group, I was asked (hypothetically, I hope) "What suggestions do you have for the person who falls into none of your categories; for the person who is barely eeking out a destitute existence, who perhaps does not even have a place to live?" For a moment I was startled, hard-pressed to imagine such isolation.

In the end, I could only respond that there are people whose situations reflect other, more basic needs, which must be met before technology can become an issue. For blind people, no less than sighted ones, technology is neither a panacea nor universally relevant. To the extent that there are many visually handicapped persons who will not be in a position to embrace technology until other basic needs are addressed, the future of technology for this population still hinges on much broader beliefs and decisions of society. With this in mind, it is appropriate to turn to the structural role of "the agencies" in technology dissemination for our last chapter.

Chapter IX

What Agencies Can Do

The blindness service system is large and diverse. It includes a variety of federal and state agencies, as well as private entities. These private agencies are usually nonprofit, have differing service focuses, and may deal primarily with visually impaired people or work with a wider client population. In broad terms, what each of these agencies involved with blindness can do in the equipment area depends upon a combination of factors. The agency's history, its formal mission, its beliefs about its clients and society, and its resources all play their parts.

All else being equal, most agencies in the service system would favor maximizing the flow of technology into the hands of blind people. Most, too, would like to play a constructive role in this dissemination. If asked why technology and related services were not more widely available, they would give various answers. But probably the most common, indeed an almost reflexive responsive, would be that adequate financial resources do not exist. Thus, in any discussion of the system's response, the question of financial resources inevitably takes center stage.

The conflict between service categories and amongst service providers for scarce resources is acute. But no one should assume that infusion of substantial new funds into the service system would silence the debate or clarify what remains to be done.

The tenets that agencies bring to the technology realm continue to reflect the same uncertainties and ambiguities that have characterized the development of services to blind people throughout this century: Should clients get the equipment they want, or should devices be selected based on professional assessment of what they need? Is it more cost effective for public and private expenditure to concentrate upon equipping agencies with the technological resources to train and help their clients, or should resources be focused on putting equipment directly into the hands of users? Ought technology to be made a part of work with every client, or should it be treated as a reward for those who exhibit positive adjustment? How is the cost effectiveness of money and time invested in technology to be measured, as compared with the value of other services? Should responsibility for bringing computer technology to blind people be vested in those skilled in working with them, or should other community resources be aggressively utilized? Does making computers available to blind people require expertise in blindness or expertise in computers?

We care about the answers that agencies give to these questions for eminently practical reasons. Although computer technology is one of the most decentralizing forces to occur in rehabilitation for many years, the dominant role played by agencies in the lives of many blind people is likely to continue mediating technology's impact for a long time to come. The decisions made by agencies, and the policies adopted by the service system, will determine, perhaps more than anything else, how broadly and how much the new sensory aids technology will serve to enhance the quality of life for visually impaired people in this country.

If these echoing, timeless questions posed above have not been answered by three generations of rehabilitation professionals and consumers, there is little hope of resolving them here. It would be easy to suggest ways that changes in service system philosophy could contribute to more extensive utilization of technology. Instead, the ideas set forth in this concluding chapter will take consensus thinking and mainstream practice as their point of departure. Recognizing current economic and legal realities, and drawing upon what many conservative agencies already do and think, these suggestions will be in all respects what the world calls "realistic." In many cases, they will rely upon models of successful innovation that agencies around the country have already pioneered.

The economic realities can be easily summarized. Times are tough. While the VR system has escaped the funding cuts that have devastated so many other social and human services sectors, no significant growth in the level of funds for the purchase of adaptive sensory aids can be anticipated in the present fiscal environment. Tempting as it is to suggest that reform and restructuring could somehow free up funds by diverting them from less productive pursuits, the ferreting out of waste holds comparatively little hope. Even with a more than usual alertness to cost effectiveness and efficiency, existing expenditure patterns within the system will not witness dramatic redeployment in the near future.

For those who believe that state commissions and private agencies should make a greater investment in technology, it is tempting to point to waste and ineffectual programs as a source from which some of the necessary funds could be recovered. Depending on one's definition, there is waste in every organization. But the prevailing expenditure patterns in public and private blindness-service agencies are largely determined by factors beyond the reach of "better management." No bountiful harvest of technology funding will emerge from turning off the lights or laying off executives, or

from reallocation of funds and personnel currently committed to existing service delivery patterns.

Private funding from business, foundations and individuals, faces similar constraints. While private giving in this country is growing steadily, demand and competition are, if anything, increasing faster than supply, as the nonprofit sector struggles to offset massive cutbacks in its traditional levels of federal support.

Despite this sobering background there remains a great deal more that can be done. Whether in the use of computers for training, exposure and evaluation within agency settings, or in the greater dissemination of technology to individual users, significant and exciting opportunities do exist. Some involve virtually no costs; others actually hold out revenue enhancement possibilities for the agencies involved. Conditions will vary enormously from agency to agency, but among the sampling of ideas that follow, there should be something to stimulate the thinking of most readers.

A number of the steps that state commissions can take follow directly from our discussion in Chapters II and V (d). There is much that these agencies can do in their relationships with coordinate state governmental units, and in the information they supply their staffs and clients, to ensure the integrity and successful completion of the procurement process.

Throughout their history, state blindness agencies have been understandably hesitant to be aggressive or to adopt an advocacy posture. Their constituencies were small, the needs great and their ability to function hinged more than a little on the maintenance and cultivation of goodwill. But when it comes to the equipment procurement process, models for more effective administration within the framework of accountability do exist. As important, implementation of these models need pose little risk of interagency conflict or legal re-
crimination.

In those states where the statutory and regulatory framework poses significant and recurrent obstacles to an effective

technology strategy, opportunities usually exist for the forging of agreements, formal and informal, between the state agencies involved. State budgeting officials, comptrollers and purchasing managers are generally little familiar with the special issues involved in the rehabilitation process. Experience indicates that where properly approached and fully informed, they are generally prepared to make the necessary accommodations.

A corollary notion is that state agency line staff need to be familiarized with all the rules, and need to be encouraged to ask questions when necessary to give clients the clear answers that would avoid frustration and defuse potential conflicts. Here I am not suggesting an idealistic management style or costly and time-consuming in-service training. All managers, no matter how beleaguered, hold meetings, send out memos, chat around the coffee urn or water cooler. Informality will often suffice.

A little farther afield from their traditional roles is Commission support for state loan or loan guarantee funds. Since the use of such programs is likely to increase, the issue for the blindness agencies is less one of lobbying for their creation than of assuring that the interest of visually impaired borrowers are taken into account in their design and operation. Such funds, particularly if loan guarantees are used, represent a highly leveraged and cost effective commitment of public funds. Yet, their usefulness and availability to visually impaired applicants can hinge on subtle points of wording or emphasis.

In this connection, a number of state blindness agencies are authorized to receive contributions to Gifts or Bequests funds. Depending upon agency discretion in the use of such donations, these funds may be available as seed money for the establishment of revolving loan funds or for the underwriting of loan guarantees. At least one state has attempted to use its Gifts fund in precisely this way.

Were a state agency interested in building such a fund, one means of doing so might be to accord state tax deductibility to the contributions made to it. In most states this would require legislation, and hence, a degree of activism on the commission's part. But such tax deductibility would involve little revenue loss to the state. A revolving loan fund could almost certainly be administered without loss of state funds, especially if nominal interest were charged. Where the consequential savings to other state programs can be carefully estimated, it is highly likely that state officials could be persuaded of the value of such measures.

State commissions for the blind have not tried to take much advantage of their buying power. In the marketplace for devices designed specifically for blind users, their aggregate buying power, while likely to shrink in percentage terms, continues to be predominant. Acting individually, or acting collectively through such bodies as the National Council of State Agencies for the Blind (NCSAB), these institutional consumers can do a number of things. They may be able to buy in bulk, so as to reduce unit costs. They may also use their buying power to intensify price competition among providers, to encourage suppliers to extend credit to nonagency purchasers, to enforce warranty and service contract protections vigorously on behalf of themselves and their clients, and to ensure that good faith and cooperation among the adaptive device suppliers are properly publicized and acknowledged. In 1984 NCSAB gave consideration to the possibility of ranking adaptive technology suppliers. A more systematic effort to identify what is needed from these suppliers and to use buying power as a means of getting it could be of great help to VR and non-VR purchasers alike, while also serving to stabilize the adaptive device industry in important ways.

In their dealings with clients there are also things the state agencies can do. Networking is among the most important of these. Former clients who have benefited from technology should be encouraged to share their experience with those who

follow. Former clients who have not been successful with equipment should, for that matter, be encouraged to share the lessons of their experience, as well. Beyond such networking, clients who no longer have use for equipment that is still functional might be assisted and encouraged either to return it or to pass it on directly.

Such networking or recycling efforts can be organized on informal bases, at little or no cost. Their success will depend on a noncoercive and nonbureaucratic appeal to the instincts of people to share their experiences and resources with others. In some cases, financial incentives for the recycling of serviceable, used equipment can be created. These would involve the use of private agencies or other tax exempt organizations as conduits for the receipt of the equipment as tax deductible contributions.

The goals of the rehabilitation process can be stifled in all too many ways. We have discussed in Chapter II the particularly unfortunate instance represented by cases in which work-related equipment that is called for under an IWRP cannot be obtained, due to factors outside the VR agency's control. Other examples can be traced to inconsistencies between the agency's own goals and some of its regulations and policies.

Each state Commission should review its guidelines and its interpretations of the federal law, in order to determine whether the practices and procedures that have built up over time are fully consistent with the agency's own goals in the use of technology. The purpose of such a review is not necessarily to increase the use or availability of the technology. Rather, it should be aimed at assuring that no unintended or unneeded barriers exist to whatever degree of availability the Commission actually intends. Where possible, broad based advisory panels, including consumer group and private agency representatives, and other state agencies, if appropriate, should be convened for this purpose. Models for such a dialogue are readily suggested by the cooperative approach that

has emerged around several state-wide "needs assessment" studies in the past several years.

Like the state agencies, private agencies face numerous and difficult challenges. Not only must they devote ever-greater efforts to fund-raising, but, in lobbying for public policy reform, those that receive federal funds face efforts by the federal government to restrict their ability to do so. But if these agencies face new and unprecedented dangers, they can look forward to exciting and innovative opportunities as well.

Many of the service agencies in question rely on Medicare and Medicaid reimbursement in connection with portions of their work. As major providers of services to elderly and impoverished citizens, the nonprofit sector often can play an important role in efforts to modify and improve state Medicaid plans. Their views often command considerable attention and influence. As discussed in Chapter VIII (a), when changes in state Medicaid plans are under consideration, such agencies may be presented with valuable opportunities to work toward the inclusion of adaptive sensory aids. As providers of technology service to prospective users, the interests of service providers and clients can converge effectively in the effort to improve the medical assistance program. This is especially the case in the close relationship between low-vision services and low-vision aids.

In connection with in-house training programs, agencies frequently point to the high capital costs associated with acquiring computers and adaptive peripherals. Related problems include the costs of training staff in the use of this equipment, and the rapid rate at which both devices and instructional skills are superceded by new products. These costs, while real, need not be prohibitive.

More and more agencies are instituting computerized management information systems to handle their in-house reporting and record-keeping needs. Provided the question of accessibility to visually impaired clients and staff members is not overlooked in the design of these systems, this in-house

technology may offer significant exposure and demonstration capabilities, at little cost above that for the basic administrative functions.

The cost-cutting strategies agencies adopt will depend on precisely what it is they want to accomplish. For example, the desire of some agencies to approach technology on the same "full-service" basis as they have provided other rehabilitation services is both understandable and laudable. Doing it this way naturally imposes considerable financial burdens, however. An agency can contribute a great deal to technology dissemination by mounting a far more modest program, one that recognizes the diversity of inputs that will be necessary in this field, and one that takes as its point of departure what the agency is best suited to do.

If the objective is to provide clients with a general exposure or orientation to these sensory aids, or if the goal is simply to incorporate computer-dependent outcomes into the vocational evaluation process, then there is no need to obtain large numbers of identical systems. Moreover, the choice of components need not be so elaborate or finely tuned as would be the case in an individualized job analysis. For these purposes, \$100-\$200 speech synthesizers will usually do as well as the top-of-the-line, \$4,000 variety; and relatively inexpensive computers, including many that will be on sale from time to time, will suffice to meet these needs.

When it comes to training programs, there are also steps that agencies can take to keep down costs. Such programs have been hindered by two conflicting theories. One theory is that the agency must identify one or more job categories, must choose the equipment configuration that is most relevant to those categories, must train staff members in its use, and must cross their fingers that it won't be rendered technologically obsolete next week. The other theory is that the agency must have at least one of every major device on hand, so as to be able to provide the necessary individualization. Neither of these theories is invariably correct.

The first theory is a reflection of the dictaphone typing era, and locks an agency into one configuration. The second theory drastically exaggerates what an agency needs to do in order to run a responsible technology program, and makes it virtually impossible to stay completely current. Small agencies can carve out useful little niches for themselves by simply making use of whatever equipment they can get and by effectively utilizing their personnel and other available resources.

In this connection, it may also be wise to consider the use of volunteers in the conduct of training. Within the local community of computer professionals and enthusiasts, there are likely to be persons who would relate well to the issues and who would enjoy such work from a technical or social standpoint. Agencies have traditionally depended upon volunteer workers for many things, and this may be an appropriate one. If the community can be enlisted, staff training costs and other demands on limited personnel resources can be kept at a minimum. The agency's base of community involvement can also be broadened, because many of these "hackers" are not the sorts who would have come forward as volunteer drivers, readers, bake sale organizers or the like.

This potential community resource of computer professionals and hobbyists is a matter of importance to individual users as well. Many an enterprising blind person has received valuable assistance from a hacker who was located through a bulletinboard or a local users group. It does not require a knowledge of braille or any familiarity with how synthesized speech chips are programmed to solve many of the problems that blind users typically confront in making their equipment work. For many a hacker, the opportunity to solve an interface or formatting problem is a pleasurable challenge, much like giving a gourmet cook the opportunity to prepare a huge meal. To be sure, it is generally the more sophisticated adaptive technology user who can benefit most from hackers' enthusiasm and skills, but agencies can democratize this expertise in a variety of ways.

A good computer skills training program (whether couched in terms of vocational training, adjustment training or otherwise) may well teach high proficiency in the use of a particular device or system. But it need not. What it must do is give the trainee the capacity to understand the issues that will be confronted later, and the capacity to play an active role in their resolution. If that is so, it follows that the cost of equipment to be used in training can be minimized. No expensive or binding long term commitment need be made to particular devices. Items and software can be picked up from here and there as they become available, when they are cheap or used.

A client who learns on a system with simple software or on a system that can utilize only half the software package's capacity may still end up far better trained and far more self-sufficient than someone who has been trained on a state-of-the-art system. What lends enduring value to any training is the extent to which it familiarizes users with basic concepts and issues, the degree to which it prepares the user to think through subsequent selection criteria, and the ways in which it instills a realistic understanding of what technology can and cannot do.

In spearheading the dissemination of equipment to users, there is much that agencies have done. As discussed in Chapter V (d), local financial and lending institutions have been encouraged and assisted to establish revolving or open-ended loan funds, often at concessionary (below market) interest rates. Under such arrangements, the bank, savings and loan, or other lending institution agrees to make loans for equipment to persons recommended by the agency. The agency may or may not guarantee some or all of the loan, retaining a security interest (150) in the equipment if appropriate. Depending on circumstances, some measure of insurance protection may even be available to offset potential financial risk to the sponsoring agency.

Such approaches are also possible with vendor credit. For the retailer the arrangement would often be attractive, creating

new business and good public relations, while at the same time reducing commercial risk. Of course, the risk of default always exists, and it is not a risk that can be taken lightly. Even small or occasional losses might not be made bearable simply by reason of all the good the program did.

The screening criteria used will play a role in determining the extent of the risk. If an agency gets to know prospective loan recipients well, carefully explains the real hardship to others that might result from default, builds sufficient flexibility into the repayment plan to accommodate temporary job loss, arranges for recycling of the equipment if no longer needed, and chooses responsible recipients, the risks should be very slight indeed. If the agency has significant prior experience in rehabilitation or other work with blind people, it is probable that many of the loan applicants will not be strangers. In adopting selection criteria that place a premium on motivation and commitment, the rehabilitation agency and the lending institution are seeking alternatives to the traditional financial eligibility criteria. Such programs can reward trust and good judgment to a remarkable degree.

Once again, the networking opportunities suggested by establishment of revolving loan or loan guarantee funds provide agencies with additional opportunities for broadening their base in the community. For example, there are probably many blindness service agencies who have received cash contributions from successful insurance brokers in their communities, or who have had members of the insurance industry on their boards of directors. What if an agency were to suggest that a contribution from the insurance industry be made in the form of insurance for the equipment or of insurance for the loans? Contributions in these forms might be worth more than cash of equivalent value, and such contributions (which might never cost the giver a penny) might entice whole new classes of donors.

For that matter, there is actually nothing to prevent agencies from going into the equipment sales business themselves.

I use the term "business" advisedly, because the goals of affordable technology and agency solvency can be effectively merged in most cases. Agencies have many methods and opportunities for buying equipment at reduced cost. In the adaptive hardware market, there will be an agency discount program for one or another item. Best-known among these is Digital Equipment's agency discount program for its DECTalk speech synthesizer. In the mainstream device market, similar opportunities and sales are routine.

If the discount is large enough, resale of equipment to clients at below retail prices may prove of advantage to both parties. In their purchase of equipment, nonprofit agencies are almost always exempt from state sales tax, which reduces purchase price still further. Established agencies can often buy on credit (including by purchase order), meaning that cash outlays can be reduced to a minimum for the equipment. In some cases, agencies can even become what are called OEM's (that is, authorized vendors for products). By use of these mechanisms, agencies can in many cases structure equipment financing programs without creating negative cash flow for themselves.

In most states there would be no legal barrier to nonprofit or voluntary agencies' engaging as dealers in the sale or resale of adaptive technology. There may be a tax liability created if the agency is deemed to have received "unrelated business income." But any agency that has ever operated a sheltered workshop or a retail store will readily know how this risk can be avoided. The greater danger of agency involvement in the sale or financing of equipment is the possibility that the agency could end up with a financial interest in what items are recommended or selected. But this danger, too, can be guarded against in a variety of ways.

Some interesting variations on these themes exist for agencies that operate sheltered workshops or work activity centers. Assembly of adaptive hardware components, including assembly of the increasing number of devices that are be-

ing made available through kits or schematics, may offer interesting possibilities. If the agency can use its workshop to assemble or even to repair components, it can simultaneously achieve greatly reduced equipment costs for purchasers and expanded direct labor opportunities for sheltered workers. Many workshops have experience in electronics assembly, and this can be capitalized on for the benefit of blind users and workers.

The point here is the infinite variety of ways in which non-profit rehabilitation and human service agencies can participate in the dissemination of needed technology to blind or other disabled persons. They can do this at minimal financial risk, often without large capital outlays. They can frequently do it in a way that recoups administrative costs, and they can sometimes even do it at a profit, while still providing the equipment at lower prices or on better terms than are available elsewhere. They can attract contributions, volunteer resources and other kinds of community support from new sources. They can broaden their base of clients, and they can contribute to the integration of their clients, old and new, into the life of our society. Short of a loan program, there are things that even the most underfunded and poorly staffed agency can do. Even if an agency gave \$5 loans to each of its clients and filed credit reports on them when they paid the money back, it would be contributing to technology access in a responsible way.

In those states where the commission relies on private agencies for the provision of services, there is always a delicate and shifting interplay between what the state and the private rehabilitation agencies want to do. The terms of the purchase-of-service contracts that are used between them can go a long way to enhancing or inhibiting the utilization of technology. Some service providers feel that state agencies will not pay for advanced technology services, or that if they do, it is at rates that are lower than those paid for other services.

Often, the problem in these settings does not reflect a policy on the part of the state agency to restrict technology, or to force the private agency to absorb a financial loss if it provides technology. Frequently, such rate disparities are an unintended, even unconscious, byproduct of the overall service reimbursement structure, as it has evolved over the years. The issue is typically not one of either increased reimbursement or major reallocation. Rather, it is a matter of definition. Fine tuning of the agreement may suffice, at little or no increase in overall cost.

For example, if vocational training is provided in the context of some form of "clerical skills" program, it should not be difficult to ensure that computers are used in the provision of this training. Yet, all too many agencies are still using typewriters. It is one thing if they are doing so because they have a lot of typewriters around and can't afford to buy anything new. It is quite another if they have not sat down with the state to ascertain whether the substitution of computers might not be better, and if so, how they might be best phased in.

Similarly, when the definitions of such services as "evaluation," "personal and work adjustment training," and "job placement" are carefully reviewed, it will frequently appear that technology can be incorporated into these definitions, without having to add new categories to the state's list of purchasable services.

Consistent with my promise, this chapter has stressed techniques for increasing technology utilization and availability that do not impose any additional costs upon the rehabilitation system. Most have in fact focused on methods by which users can be assisted to pay for their own equipment. Another technique for enhancing equipment availability brings us squarely back to the problems faced by state agencies in following-through on their equipment decisions in a timely fashion.

Whatever agencies can do to bridge the gaps between decision and delivery will represent an unmitigated good. State VR

agencies succeed in providing adequate rehabilitation technology to many fewer clients than they mean to. Advocacy within state government can help to streamline and to expedite the procurement process. NCSAB should adopt a uniform equipment procurement statute which could be enacted into law in each state. Precedent for adoption by states of standardized legislation in connection with blind persons exists in such areas as the Model White Cane Law. Until reform in the state procurement process takes place, public and private blindness agencies could accomplish enormous results by emphasizing "bridge equipment."

By bridge equipment I mean technology that could be quickly available for short-term use in meeting employment or other real-time needs during the period of time between the VR agency's decision to provide equipment and its delivery to the client. Bridge equipment is valuable, not only in meeting immediate needs, but also in other respects. Among these are the fact that, over a period of time, it allows one device or system to facilitate the employment or other goals of more than one person. Bridge equipment also offers a sometimes invaluable opportunity to assess and select components with a degree of practicality and confidence that may not be possible in advance of actual use.

The economics of bridging systems may at first seem hard to work-out, but several options commend themselves to practitioner attention. Rental or short-term lease arrangements, yielding back the costs of some equipment items over the course of their useful life, may be feasible and appropriate in some cases. Purchase of equipment by the state VR agencies for loan by private agencies to successive clients may be possible in others.

As in everything else, the dollars and cents, the rewards and risks of a bridging mechanism depend as much upon the accounting methods adopted as upon any objective set of facts. In the design of accounting systems for the management of such programs, it should be remembered that the useful life of

a device used for computer access by blind persons may be longer than depreciation schedules would typically suggest. For those agencies familiar with creative accounting, the opportunities for "paper" profits (or paper losses, if preferred) are both endless and fully legal. And these opportunities can be seized without exploitation of clients.

Another major benefit of bridge equipment programs is that they can increase employer participation in the purchase. If an individual can demonstrate skill and achieve stability in a job over a several month period, employers can often be persuaded to invest in equipment that they would understandably have declined to purchase for an unknown blind job applicant. Anything that brings employers into the financing picture is of course desirable.

None of the funding strategies described in this guide are secret or mysterious. It behooves all agencies, public and private, to remain abreast of sources and strategies, just as they remain in touch with other economic and legal developments that affect their work. Clients should be advised of acquisition strategies, just as they are counseled in other areas. Utilizing their existing relationships, the public and private agencies making up the service system in each state can readily and cost effectively do this. For clients it will mean expanded equipment access opportunities. For agencies it will increase the options for achieving favorable outcomes in their work with clients. For vocational rehabilitation agencies in particular, it will provide viable funding alternatives, which can supplement VR resources and relieve pressure from clients who would otherwise be unaware of other sources to meet their equipment needs. A state-wide equipment funding database should maintain current information and should concentrate upon the issues and opportunities specifically applicable to the particular state. In each state, a comprehensive guide to funding sources and funding strategies should be prepared. An example of such a guide, dealing with disabled people generally, exists in Michigan. (151)

Technology is no panacea. Neither is it a passing fad. No agency that claims any serious aspiration to advancing the interests of blind and visually impaired people can afford to overlook its importance. Regrettably, we do not have a large body of information on how technology dissemination can be most effectively promoted, but there are enough precedents and enough resources (152) to stimulate productive efforts. Within the framework of available resources and existing service delivery patterns, imagination and commitment can represent the greatest resource of all, much as they do in meeting any challenge in work or life. The opportunities and the pitfalls are real. The times are hard. There will never be easy ones. Failure is less to be feared than inaction. So much has already been accomplished. To falter now would be to betray both our future and our past.

Notes

- 1 Such organizations include: the Baruch College Computer Center for the Visually Impaired (Box 515, 17 Lexington Ave. New York, NY 10010); the Carroll Center for the Blind (770 Centre St. Newton, MA 02158); the National Technology Center (American Foundation for the Blind, 15 W. 16th St. New York, NY 10011); the Sensory Aids Foundation (399 Sherman Ave. Suite 12, Palo Alto, CA 94306), and the Rehabilitation Engineering Center of the Smith-Kettlewell Institute (2232 Webster St. San Francisco, CA 94115).
- 2 Such periodicals include: "Technology Update" and "Sensus" (published by Sensory Aids Foundation); "Raised Dot Computing Newsletter" (published by Raised Dot Computing, 408 S. Baldwin St. Madison, WI 53703); "Closing the Gap" (published by Closing the Gap, Box 68, Henderson, MN 56044); "Tactic" (published by the Clovernook Printing House for the Blind, 7000 Hamilton Ave. Cincinnati, OH 45231); "Technological Innovations Bulletin" (published by IRTI, 26699 Snell Lane, Los Altos Hills, CA 94022), and "BAUD" (published by Micro-Talk, 337 S. Peterson, Louisville, KY 40206). A number of other publications also have regular technology features within a wider format. These include: the American Foundation for the Blind's "Journal of Visual Impairment and Blindness," the American Council of the Blind's "Braille Forum," and the National Federation of the Blind's "Braille Monitor."
- 3 Leading books include: "Computer Equipment and Aids for the Blind and Visually Impaired: A Resource Guide" compiled by Judith Gerber and Lois Henry (Baruch College Computer Center for the Visually Impaired, 1985); "Catalog of Vocational and Educational Aids Developed by the Rehabilitation Engineering Center" (Smith-Kettlewell Institute, 1983); "Computers

for the Visually Handicapped: Bibliography of Aids for Personal Development and Research, 1975-86" (Springfield, VA: U.S. Department of Commerce, National Technical Information Service, Catalog No. PB 86-858602/CAW INSPEC, 1986). Also four books from the National Braille Press (88 St. Stephen Street, Boston, MA 02115), all edited by Diane L. Croft. These are: "The Second Beginner's Guide to Micro Computers for the Blind" (2nd Edition, 1987); "Add-ons: The Ultimate Guide to Peripherals for the Blind Computer User" (1986); "The Second Beginner's Guide to Micro Computers for the Blind" (1985), and "The Beginner's Guide..." (1984).

- 4 Like technology, law comes from many sources. It comes from the Constitution, from court decisions, and from the regulations made by government agencies. It exists at the federal, the state, and the county or local level. But when people speak of "the law," what they usually mean are statutes, and it is primarily Federal statutes to which these footnotes will be referring.

Federal statutes are organized in something called the United States Code (USC). The USC is arranged into Titles (which might be thought of like the chapters of a book) and Sections (which might be thought of like the individual pages). The Federal Rehabilitation Act, for example, can be found in Title 29 of the USC, beginning at Section 701. So if we wanted to "cite" that statute, we would do so as 29 USC Sec. 701.

Today, almost every federal statute includes provisions for one or more government agencies to interpret and administer it. For this reason, we will also have occasion to cite the Code of Federal Regulations (CFR), which contains the rules, regulations and interpretations made by federal agencies under the various statutes. Like the USC, the CFR is organized under broad Titles, but between the Titles and the Sections, it

also has "Parts." So, for instance, the Department of Education's General Administrative Regulations are contained in Parts 75 through 79 of Title 34 of the CFR. When you got to a specific Section, you would come up with a citation like 34 CFR Sec. 75.01, or 34 CFR Sec. 77.52.

Sometimes the USC and the CFR may not be enough. You may want to identify the court decisions interpreting a particular statute. The best way to find these is to look at the US Code Annotated (USCA). The USCA is like the USC, except that it contains lots more "stuff." Among these goodies are Notes of Decision, located after each section, which will give you names and brief summaries of the cases decided under that section.

Occasionally, we will need to site other legal resources. These will be explained as they come up.

The USC and the CFR are available in many libraries, including law libraries, university libraries, many public libraries, and of course law offices. In using these books, there are a couple of things that distinguish them from other research materials. You are not interested in volume numbers, but rather in which Titles and Sections each volume contains. Although they are consecutive, a large number of Sections will be omitted or "reserved" for later use. When you find the statutory provision that you want, you also have to take care to check the back of the book for an annual supplement or "pocket part." This is used to identify amendments, court decisions or other major events in your statute's life since the main volume was published.

- 5 Vision of 20/200 in the better eye with correction, or a visual field no greater than 20 degrees.
- 6 A list of these agencies can be found in "Directories of Agencies Serving the Visually Handicapped in the US" (American Foundation for the Blind, 22nd Edition 1984). New edition is slated for publication in late 1987.

- 7 29 USC Sec. 701 et seq.
- 8 34 CFR Part 361.
- 9 29 USC Sec. 794. Some readers may wonder how this Section can be numbered 504 and 794 at the same time. The "504" refers to its position in the Rehabilitation Act, when that Act was passed, and before its Sections were distributed to the USC.
- 10 Public Law (P.L.) 99-506. This refers to the amendments as passed, literally the 506th law enacted by the 99th Congress.
- 11 P.L. 99-506 Secs. 103 (a and f), 202 (a 2), 204 (a and c), 302 (e), 603 (c) and 703 (d).
- 12 29 USC Sec. 721 (a) and 732 (b), 34 CFR Sec. 361.4.
- 13 P.L. 99-506 Sec. 202.
- 14 29 USC Sec. 721 (a 1).
- 15 29 USC Secs. 705-706.
- 16 29 USC Sec. 706 (a 13), P.L. 99-506 Sec. 103 (h).
- 17 34 CFR Secs. 361.35 and 361.43.
- 18 34 CFR Sec. 361.47 (a.3).
- 19 P.L. 99-506 Secs. 103 (a) and 202 (a 2).
- 20 29 USC Sec. 722, 34 CFR Secs. 361.40-361.41.
- 21 P.L. 99-506 Sec. 203.
- 22 29 USC Sec. 723 (a), 34 CFR Sec. 361.42.
- 23 e.g., 34 CFR Sec. 361.55.
- 24 34 CFR Sec. 361.47 (a 1).
- 25 34 CFR Sec. 361.47 (a 3).
- 26 29 USC Sec. 723 (a 3).
- 27 29 USC Sec. 723 (a 11), 34 CFR Sec. 361.42 (a 10).
- 28 29 USC Sec. 723 (a 9), 34 CFR Sec. 361.42 (a 14).
- 29 29 USC Sec. 723 (a 2), 34 CFR Sec. 361.42 (a 12).
- 30 29 USC Sec. 723 (a 2), 34 CFR Sec. 361.42 (a 13).
- 31 34 CFR Sec. 361.42 (a 15).
- 32 P.L. 99-506 Sec. 103 (f).
- 33 P.L. 99-506 Sec. 203 (a).
- 34 P.L. 99-506 Sec. 204 (b).
- 35 P.L. 99-506 Sec. 103 (b).

- 36** P.L. 99-506 Secs. 103 (i), 402 (b) and 704 (a) (creating new Title {Tit.} VI C of the Act).
- 37** 20 USC Sec. 107.
- 38** 29 USC Sec. 721 (a 9), 34 CFR Sec. 361.57.
- 39** As of mid-1986, Montana and Wyoming have opted out of the program by abolishing their state licensing agencies.
- 40** 34 CFR Secs. 361.42 (a 9) and 361.50.
- 41** 29 USC 723 (b).
- 42** P.L. 99-506 Sec. 108.
- 43** P.L. 99-506 Sec. 202 (g).
- 44** 34 CFR Sec. 361.48.
- 45** 29 USC Sec. 732, P.L. 99-506 Sec. 209.
- 46** P.L. 99-506 Sec. 203 (b).
- 47** P.L. 99-506.
- 48** P.L. 99-506 Sec. 103 (c).
- 49** Over the past five years, such studies have been conducted in Arizona, Massachusetts, New Jersey, New York and Wisconsin, among other states. An interesting example is: "Assessment of Services Provided to the New York State Blind Population" by H. Alfasso and M. Haggerty (New York State Department of Social Services, 1984).
- 50** 42 USC Sec. 301 et seq.
- 51** 42 USC Sec. 402.
- 52** 20 CFR Part 404.
- 53** The Social Security Administration's instructions to field staff are contained in the Program Operations Manual System (POMS). The POMS are not widely available in libraries, but Social Security offices and many advocacy groups have them. When faced by a disagreement with SSA, it is advisable to refer to the POMS and reasonable to ask officials to verify a point in them. A citation to the POMS begins with a two-letter prefix (such as "SI" for Supplemental Security income or "DI" for Disability Insurance). Altogether, there are thir-

teen such Parts. After the two-letter Part designation there will be a five digit number followed by a decimal point, then followed by three more digits. The first three digits after the Part designation represent a chapter number, the fourth and fifth digits a subchapter, the three digits after the decimal point a section number. In any given subchapter section numbers may begin with .000.

- 54** 42 USC Sec. 416 (i 1).
- 55** 42 USC Sec. 423 (d), 20 CFR Sec. 404.1572.
- 56** 42 USC Sec. 423 (d and e), 20 CFR Sec. 404.1572.
- 57** 42 USC Sec. 416 (i 1 B), 20 CFR Sec. 404.1581.
- 58** DI 11010.190.
- 59** 20 CFR Sec. 404.1572 (b 2).
- 60** 20 CFR Sec. 404.1584 (d), DI 11010.245.
- 61** e.g., DI 41001.015.
- 62** DI 10105.095, DI 13010.210.
- 63** 42 USC Sec. 423 (d), 20 CFR Sec. 404.1576, DI 10520.001-.065.
- 64** P.L. 96-265.
- 65** 20 CFR Sec. 404.1576.
- 66** 20 CFR Sec. 404.1576 (c 4).
- 67** 20 CFR Sec. 404.1576 (a).
- 68** Form SSA-853.
- 69** 20 CFR Sec. 404.1576 (f 5).
- 70** 20 CFR Sec. 404.1576 (c 7).
- 71** 20 CFR Sec. 404.1576 (d 2).
- 72** 20 CFR Sec. 404.1576 (d 3).
- 73** 20 CFR Sec. 404.1576 (e 3).
- 74** 20 CFR Sec. 404.1576 (e 4).
- 75** Compare, generally, DI 11010.260 and DI 11095.135 (IRWE work activity sheets).
- 76** 20 CFR Sec. 404.1576 (g), DI 10520.001-.065.
- 77** 42 USC Sec. 422 (c), 20 CFR Sec. 404.1592.
- 78** 20 CFR Secs. 404.467 (a), 404.1583-.1584, DI 41001.025 B.

- 79 42 USC Sec. 1382 et seq., 20 CFR Part 416.
- 80 42 USC Sec. 1382a, 20 CFR Sec. 416.1102.
- 81 20 CFR Secs. 416.1112 (c 4) and 416.1124 (c 12).
- 82 20 CFR Sec. 416.1124 (c 12), SI 00840.010. An explanation of this citation can be found in n. 53.
- 83 20 CFR Secs. 416.1112 and 416.1124, SI 00840.000 et seq.
- 84 Compare, 42 USC Sec. 1382a (b 4 A) and SI 00840.120 (blind) with 42 USC Sec. 1382a (b 4 B) and SI 00840.121 (disabled).
- 85 20 CFR Sec. 416.1124 (b).
- 86 SI 00810.210 B.
- 87 20 CFR Sec. 416.1112 (c 2), SI 00840.100.
- 88 20 CFR Sec. 416.976.
- 89 42 USC Sec. 1382a (b 4), 20 CFR Sec. 416.1112 (c 7), SI 00840.130.
- 90 SI 00840.130 B.
- 91 SI 00840.130 B. 1.
- 92 SI 00840.130 B. 2.
- 93 SI 00840.130 B. 3.
- 94 20 CFR Sec. 416.1112 (c 7).
- 95 SI 00840.133 C.
- 96 SI 00840.133 A.
- 97 SI 00840.133 B.
- 98 SI 00840.133 C.
- 99 SI 00840.136.
- 100 SI 00840.136.
- 101 SI 00840.130.
- 102 42 USC Sec. 1382b (a 4), 20 CFR Secs. 416.1180-1181, SI 00870.000 et seq., SI 00840.140.
- 103 42 USC Sec. 1382 (a 3).
- 104 20 CFR Sec. 416.1220 et seq.
- 105 20 CFR Sec. 416.1180, SI 00840.140.
- 106 20 CFR Sec. 416.1181 (a-g).
- 107 SI 00870.050.
- 108 "Annotated Directory of Independent Living

- Programs" (Independent Living Research Utilization Project, P.O. Box 20085, Houston, TX 77225).
- 109** SI 00840.140 A.
- 110** "Enhanced Consumerism Within Commercial Rehabilitation Product Markets: A Goal for Independent Living" by Kenneth G. Reeb, Jr. (Electronic Industries Foundation, Rehabilitation Engineering Center, 1901 Pennsylvania Ave., N.W., Suite 700, Washington, DC 20006).
- 111** New York State Department of Social Services, Equipment Loan Fund for the Disabled, P.O. Box 1935, Albany, New York 12201. The Supported Employment Revolving Loan Guarantee (SERLG) program operates under the jurisdiction of the California Department of Rehabilitation.
- 112** "Technology and Handicapped People" by US Congress, Office of Technology Assessment (New York: Springer Publishing Co., 1983) pp. 177-179.
- 113** The Vera Program is no longer in operation. The Cleveland Society for the Blind is located at 1909 E. 101 St. Cleveland, OH 44106. The California Council of the Blind is the state affiliate of the American Council of the Blind. The Braille Institute is located at 741 N. Vermont Ave. Los Angeles, CA 90029. The Conklin Center is located at 405 White St. Daytona Beach, FL 32014..
- 114** For those interested in understanding the issues involved in establishing revolving loan funds, another thoughtful and informative paper from the Electronic Industries Foundation should be consulted: "Expanding Equipment Credit Financing Opportunities for Persons with Disabilities Through Use of Revolving Funds" (1987) (same authorship and publication as n. 110).
- 115** The Tax Reform Act of 1986 (TRA) was enacted as P.L. 99-514. The Internal Revenue Code (IRC) is Tit. 26 of the US Code.
- 116** IRC Sec. 213 as amended by TRA Sec. 133.

- 117** 26 CFR Sec. 1.213-1 (e).
- 118** "Prentice-Hall 1986 Tax Guide" paragraphs 16,380, 16,383 (e 1), 16,413 (60) and 16,431.
- 119** IRC Secs. 67 and 162, TRA Sec. 132.
- 120** IRC Sec. 67 (b), TRA Sec. 132.
- 121** IRC Sec. 67 (d) as added by TRA Sec. 132 (a).
- 122** IRC Secs. 170 and 501.
- 123** IRC Sec. 63 as amended by TRA Sec. 102.
- 124** IRC Sec. 32 as amended by TRA Sec. 111.
- 125** IRC Sec. 63 (h 4) as amended by TRA Sec. 511.
- 126** IRC Sec. 51 as amended by TRA Sec. 1701.
- 127** 20 USC Sec. 1401 et seq., 34 CFR Part 300 et seq.
- 128** 20 USC Sec. 1413.
- 129** 20 USC Secs. 1401 (a 19) and 1413 (11), 34 CFR Sec. 300.13 (a).
- 130** The Association of Instructional Resource Centers for the Visually Handicapped.
- 131** Using P.L. 94-142 funds, the state's Special Education Regional Resource Centers can provide equipment to teachers for use with groups of students, or to individual students directly on loan.
- 132** 20 USC Sec. 1401 (a 16 and 17).
- 133** e.g., "Negotiating the Special Education Maze: A Guide to Parents and Teachers" by W. Anderson et al. (Prentice-Hall, 1982); "Exceptional Children: Introduction to Special Education" by D. P. Hallahan and Kauffman (Prentice-Hall, 3rd Edition, 1986); "The Special Education Handbook" by Kenneth Shore (New York: Teachers College Press, 1986), and "Unlocking Doors" (Minneapolis: Parent Advocacy Coalition for Educational Rights, 1986). In addition, there are a number of excellent books on issues in the mainstream education of visually handicapped children, and valuable resources are available from the Council for Exceptional Children in Reston, VA, and from the Special-Interest Affiliates of national consumer organizations.

- 134** "Directory of College Facilities and Services for the Handicapped" edited by C. Thomas et al. (Phoenix, AZ: Oryx Press, 2nd Edition, 1986).
- 135** "Financial Aid and Disabled Students, 1986 Edition" (HEATH Resource Center, American Council on Education, 1 Du Pont Circle, Suite 670, Washington, DC 20036-1193).
- 136** National Scholarship Research Service, c/o Jim Mitchell, 2752 Middleton Ave. No. 29-H, Durham, NC 27705. NSRS indicates a sensitivity to the needs of students attempting to meet the "similar benefits" requirement of the VR program.
- 137** "Third-Party Financing of Low Vision Services: Part I" by Corinne Kirchner, 78 Journal of Visual Impairment and Blindness p. 372 (1984) (dealing with private health insurance and Medicaid), and "Third-Party Financing of Low Vision Services: Part II" by Kirchner, 79 JVIB 70 (1985) (dealing with state rehabilitation agencies). Also of interest in this connection are: "A Guide to Health Care Coverage for the Child with a Chronic Illness or Disability" by Alice M. Leonard (Madison, WI: Center for Public Representation, 1987) and "Special Education: Financing Health and Educational Services for Handicapped Children" (Gaithersburg, MD: US General Accounting Office, Document No. GAO/HRD-86-62BR, 1986).
- 138** 42 USC Sec. 1395 et seq.
- 139** 42 USC Sec. 1396 et seq.
- 140** 98th Congress, H.R. 4437 and S. 1115; 99th Cong. H.R. 1432.
- 141** Hearings before the Subcommittee on Health of the Committee on Ways and Means on H.R. 4437 (98th Cong. Second Session, February 27, 1984, Report 98-63).
- 142** 42 USC Sec. 1395x (n).
- 143** "Disabilities and Technology: Governor's Report on

- Technology for People with Disabilities" prepared by Rachel Wobschall et al. (St. Paul: Office of the Governor, 1986).
- 144** 13 CFR Part 118.
- 145** The Blinded Veterans Association (BVA) is located at 1726 M St., N.W., Suite 800, Washington, DC 20036.
- 146** e.g., "Eligibility for Prosthetic Items and Sensory Aids for Blinded Veterans: Excerpts from a Visual Impairment Training Services Conference" 40(5) BVA bulletin p. 15 (September-October, 1985); also "Computer Related Access Device Training Program (CRAD) for Blinded Veterans" (Draft Revised VA Circular 10-84-41).
- 147** "The Handicapped Funding Directory, 1986-87 Edition" (Research Grant Guides, P.O. Box 10726, Marina Del Rey, CA 90295); the Foundation Center, 79 5th Ave. New York, NY 10003. The Foundation Center also maintains four regional libraries. A number of state fund-raising councils also publish directories or resource lists.
- 148** Associated Services for the Blind, Electronic Aids Program, 919 Walnut St. Philadelphia, PA 19107; Opportunities for the Blind Inc., P.O. Box 660, California, MD 20619.
- 149** California Public Utilities Code Sec. 2881.
- 150** A security interest is widely used in commercial law. Essentially, it involves the registration with a court or county clerk of one's interest in tangible property. Secured creditors are generally well protected against defaults, bankruptcies and other untoward happenings.
- 151** "Funding Assistive Devices in Michigan" in the PAM Repeater, No. 25 (Lansing, MI: the PAM Assistance Center, September, 1984).

- 152** "A Summary Guide to Social Security and Supplemental Security Income Work Incentives for the Disabled and Blind" (US Social Security Administration, Publication No. 64-030 ICN 436900, September, 1986); "Benefits for Disabled People Who Return to Work" (SSA Publication No. 05-10095, November, 1985); "Funding Strategies for the 1980's: Report of August 1982 Advanced Topical Discussion" (Washington: Rehabilitation Engineering Society of North America, 1983); "Technology and Handicapped People" by the US Congress, Office of Technology Assessment (Washington: Government Printing Office, Stock No. S/N052-003-00874--2, 1982); "Guidelines for Seeking Funding for Communication Aids" by D. J. DePape and L. A. Krause (Trace Research and Development Center, University of Wisconsin-Madison, Revised Edition, 1980), and "Funding of Non-Vocal Communication Aids: Current Issues and Strategies" by Virginia Ruggles (Trace Center, 1980).

Dear Reader,

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Thank you for your time and interest.

Sincerely,

Steven B. Mendelsohn