



DIRECTIONS

Technology in Special Education

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Software for Special Needs

What Can be Done to Increase Accessibility?

Adapted from "Applicatoin Software Design Guidelines: Increasing the Accessibility of Application Software to People with Disabilities"

There are many people who need to be able to use standard software programs in their jobs, schools or homes but are unable to because of the design of the programs or their interfaces. These people, because of accident, illness, congenital condition or aging have reduced visual, hearing, physical or cognitive language abilities. The current estimate of people with disabilities is over 40 million people - a sizable portion of our population.

Shared Responsibility

Making computers and software accessible to people with disabilities is not just the responsibility of application software developers. In fact there is only so much of the problem that can be addressed at the application software level. System software manufacturers and 3rd party disability access software and hardware developers also need to play an important role.

Basically, making application software more accessible consists of three complementary components:

1. Designing the software so that it is as usable as possible to the greatest number of people -without requiring them to use special adaptive software or hardware. (This is referred to as Direct Accessibility).
2. Designing the software in such a way that it will work with special access features built into the operating system or attached to it by users who require them. (i.e., Compatibility with operating system or third-party access features / software / devices for those people who will not be able to use the software directly.)
3. Making sure that the documentation, training, and customer support Systems are accessible.



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My Dear Friends

3/97

I believe that the winter is almost over, and that the outside is beginning to change already! Some of the days past have been sunny and somewhat warm, (or at least warmer) I truly love the change in seasons!

Change (in whatever form) is good for us they say, and I'm sure that they're right, (although I've never been able to figure out exactly who *they* are. ..but *they* always seem to be right!) We can grow and potentially learn when we are forced to change, and we can experience new ways of doing things that we have been doing in one way for a very long time. I think that the World Wide Web is providing an opportunity for all of us to change the way we search for and access. And I think it's a good change!

Just tonight I was looking for real estate in an area of northern Virginia for friends who will be moving there soon. It was so incredibly easy to just type Virginia into the window on the Lycos search page. Literally seconds later, I was presented with hundreds of pages of information that were just a click away. It still amazes me, and I spend a great deal of time "surfing" around for information.

I encourage you to "get on up there" if you haven't been there yet. You might start out at our page, (<http://www.dreamms.org>) because you can get anywhere from there... (and you can obtain a great deal of Assistive Technology information while you're there too!)

They say that the Web is where we're going, and like always, I'm sure *they* know what they're talking about! (Whoever they are :-)) ..)

As always my kindest personal regards,

Janet

DIRECTIONS

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'Woofing' Isn't Talking

By: Sandy Osborn

IDEAS, Special Needs Consults, Inc.

I saw a Peanuts cartoon recently that reminded me of the dilemma non-speaking children face. In the cartoon Lucy and Snoopy were in the yard and Lucy said to Snoopy, "We have to talk". She then said, "But how can we talk if you're a dog and dogs can't talk" Snoopy barked "Woof". Lucy said, "Woofing isn't talking". Often when non-speaking children vocalize, gesture, use facial expressions or try to express thoughts with augmentative communication systems, the adult message receiver doesn't get the intent of the message because they rely so heavily on spoken language. We, as educators and parents, must strive to enhance the communication skills of the non-verbal child and heighten the awareness of their message receivers so that talking is only one way to communicate.

Literacy is an important overall goal for every child but it is not necessary to develop face-to-face good communicative abilities. Many augmentative communication users lack literacy skills and use graphic symbols on their communication displays. When a child has a communication system he must learn to make choices of vocabulary items that will express his intended message. If the vocabulary item he wants is not a part of his system he must devise another way or select a different vocabulary item to get his message across. He must be able to clarify his message if the message receiver misinterprets it. These, and many other skills and strategies must be learned and practiced in appropriate context if

the child is ever to become a proficient communicator.

Where in the regular school day can this kind of skill building take place? Should it be done in one-to-one therapy settings? Should it be done in small group classroom instruction where interactive turn taking occur spontaneously? Both individual and small group instruction are needed when skills with augmentative communication systems are being taught and used.

One-to-one instruction is needed initially when the concept, specific vocabulary or language usage, is being introduced and new vocabulary is added to the communication system. Immediately or concurrently, the specific skill should be practiced in small group instructional settings where communication interaction include conversational turn taking and spontaneity.

For me this can best be done when the classroom teacher uses topical units of instruction with selected vocabulary. For example, the speech therapist wants to introduce *who* questions. With collaborative planning, the teacher has a short unit on the family or our classmates that lends itself to asking and responding to *who* questions. Likewise, when the speech therapist will be working on *when* questions, the individual instruction can coincide with a classroom unit on time(s) daily events occur at home and at school. The teacher often uses some type of curriculum framework to

develop instructional units for the classroom. Through collaborative planning the teacher shares elements of the curriculum with the speech therapist so they can work on the same skills and vocabulary simultaneously thus reinforcing the instruction each is responsible for with little confusion for the child. The child learns strategies to use to respond in real life situations and has opportunities in a classroom setting and at home to practice the use of the strategies with teachers, classmates, family members and care givers. This becomes powerful instruction when there is daily reinforcement for language learning and practice is real and not contrived.

The curriculum for anyone class for anyone year is no more or less than a particular teacher embodies in her pupils program. Important elements of curriculum that should be included:

- (1) defining the yearly scope of study;
- (2) selecting topics for units of instruction;
- (3) developing organization of content (i.e sequence of skills/information);
- (4) and, classification of the functional speaking vocabulary (i.e. the vocabulary necessary to oral communication in the teaching-learning process and pertinent to daily living).

Consideration of these elements in developing instructional units provides teachers the boundaries and guidelines they need to develop multi-year

Please see WOOFING on page 11

ATFSCP Notes

The Assistive Technology Funding and Systems Change Project

FREQUENTLY ASKED QUESTION ABOUT THE LEGISLATIVE PROCESS

By: Steven Mendelsohn, Esq., December 1996

Question: Where do laws come from?

Answer: Laws passed by Congress, state legislatures by county or municipal councils, go through a formal process to become laws. To begin the process, a member of the legislative body must introduce them.

Question: How does a bill get from Congress to the President's or the Governor's desk?

Answer: In the US Senate and the House of Representatives, each bill introduced is assigned a number. Senate bills begin with "S.", and bills in the House begin with "H.R." It is the same in most state legislatures. A joint or concurrent resolution introduced by both Houses may have a different prefix.

After introduction, a bill is referred to the committee or committees that have jurisdiction over the subject matter. For example, in the Senate the Subcommittee on Disability Policy had jurisdiction over the Individuals with Disabilities Education Act (IDEA). However, many committees had jurisdiction over the Americans with Disabilities Act because the range of issues was much broader in that bill. The committee to which a bill is referred may make a difference in its passage. Some committees may be more favorable to a bill than others. Sometimes there may be many bills introduced on the same subject.

Once a bill is referred to a committee, a process called "mark up" begins. In this process, the bills are usually edited and reworked. The Committee reviews them, often line by line. Votes are taken on various sections of the bill. The result may be a version of the original bill, or a combination of several bills in one committee version, or no bill at all. A bill introduced by a member of the majority party is more likely to be marked up and reported out than one introduced by a minority party member. This process may be unfolding in both chambers of Congress, or in both houses of your state legislature, simultaneously. Remember, both houses must pass a bill for it to become law. If the versions passed are different, a Conference Committee is convened. This consists of members of both chambers. It will be convened to develop a joint bill, which must be adopted as the final version by each chamber.

In most state legislatures, the mechanism used is for one house to adopt the other house's version. However, a bill should be introduced in both houses. A chamber is not likely to adopt the bill passed by the other if it has not passed its own version.

Question: What happens after the Committee stage?

Answer: A bill reported out by a committee with a recommendation for passage has no guarantee that it will be passed, or even that it will ever get voted on by the full chamber. Each legislative

body has its own set of rules. A bill may be voted out or brought up after being voted out under a "rule" that bars any changes or "amendments." In other cases, the determination of whether or when the bill will be put on the calendar for consideration on the floor will depend upon the decision of the speaker or the majority leader. This usually happens in the state legislatures. In the U.S. Senate, the vote of three-fifths of the members is necessary to end debate and force a vote on most bills. This procedure is called "cloture." Under the rules of the House of Representatives, the time allowed for debate is usually determined by the existing procedural rules of by agreement among the bill's managers and other leading players.

If amendments to the bill are allowed when a bill is comes to the floor, the advocacy surrounding it usually comes to a peak. Many amendments may be offered as supporters of the bill try to gain the support of opponents, or as opponents try to make the proposal unpalatable to its supporters. Some amendments are introduced because members feel they would really help; others are introduced for tactical reasons.

Eventually a version is passed by each chamber. After that happens, the Conference Committee convenes. This committee is made

up of representatives from the Senate and the House of Representatives. Agreement is usually reached by approving language proposed by both chambers when there are differences. After the committee finishes its work, the bill will come back for vote. Ordinarily, it will be passed.

Question: What happens after Congress or the State Legislature passes the bill?

Answer: The next step is for the President or Governor to sign or veto the bill passed by both chambers. In most cases at the federal level, the President must accept or reject the substance of the law as a whole. If the bill is signed (or if no action is taken within a specified time) the bill

becomes law. If it is vetoed, it goes back to the Congress or state legislature, which can override the veto with a two-thirds majority of both chambers.

Question: Does anything else happen after the bill officially becomes law?

Answer: Many laws are written very generally. They contain sections which state that they must be implemented by a certain federal agency. This means that regulations defining its terms, clarifying its unclear sections, and arranging its enforcement must be adopted.

For example, the Architectural and Transportation Barriers Compliance Board (the Access Board) and the

Federal Communications Commission (FCC) are trying to decide what the accessibility section in the Telecommunications Act of 1996 means. The Act does not clearly define accessibility. The FCC must define, with public input, the meaning of "readily achievable" in the section of the law that refers to equipment and services accessibility. Therefore, the guidelines they develop will have a great impact on the new law.

The opinions expressed herein do not necessarily reflect the position or the policy of the U .S. Department of Education, and no official endorsement by the U.S. Department of Education of the opinions expressed herein should be inferred.§

CONFERENCES & EVENTS

Date: Mar 18- 22, 1997
Event: CSUN Technology & Persons with Disabilities
Location: Los Angeles, CA
Information: 818-677-4929

Date: Mar 26- 28, 1997
Event: NW Council for Computer Education (NCCE '97)
Location: Portland, OR
Information: 541-346-3537

Date: April 1 -5, 1997
Event: Society for Information Technology and Teacher Education (SITE) Eighth Annual Conference
Location: Orlando, FL
Information: 804-973-3987

Date: April 22 -23, 1997
Event: Fifth Regional Symposium and Exposition for Persons with Disabilities
Location: Virginia Beach, VA
Information: 757-497-0692

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Technology & Inclusion

Post-Secondary Education and the Transition into Adult Services

Jamie Judd-Wall

While for the majority of students with disabilities, public school education ends with graduation following grade twelve; public school education is generally extended through age 21 for students with more severe disabilities. It is this group of students that we will be discussing in this, the final article in the series.

Both educators and adult service providers make certain assumptions about the range of services in the public school and the range of services provided by adult service providing agencies. These assumptions define what each of the agencies expect of the other and the nature of services to be provided to their clients.

The core of the educational process is to teach students. Educators implement various programs and technologies to assist and instruct students, enhance development and train functional skills. Because this is at the core of the educational process, adult service providers work with the assumption that when a student, or client, reaches their agency they are able to demonstrate a mastery of certain skills.

Adult service providers view their role with their clients as the implementation of those skills taught, enhanced and trained by the school system; not the development of new skills. The terminology most frequently used is "skills in evidence". In other words, the rehabilitation agency or other adult service providing agency will help you

use what you can already do but not learn or develop totally new basic skills.

For example: A client, or student, may be enrolled in junior college for a specific vocational training class, such as engine repair, because that class builds on existing skills using the reading, writing and technical skills developed in the school system. A client may not be enrolled in a basic reading class because *teaching to read* is an essential job of the school system. Basic reading should be among the skills in evidence when a student leaves the school system.

Educational Priorities and Transition Necessities

If your student uses assistive technologies as a communication or access tool, having skills in evidence is a necessity.

If you expect an adult service providing agency to provide a specific piece of equipment, your student must have proficiency with that equipment before leaving the school system.

I cannot begin to count how many times I have been told by parents and school personnel: "We are going to ask XXX agency to get a Dynavox (or other piece of equipment) for Jose because we think he will be able use it." That strategy will not result in the provision of the desired equipment ... or the necessary therapies to implement the equipment. You must be

able to demonstrate that Jose not only will be able to use the item in the future but is using the item now with some degree of success. If you have not used a Dynavox, what other equipment with Dynavox-like features have been used successfully? What are the existing skills that can be demonstrated? In other words, are there skills in evidence when the student leaves the school system? The adult service providing agency is then in the role of using existing skills not building new skills.

If you want a computer and access equipment for computer access, the skills in evidence guidelines again come into play.

What computer skills can the person demonstrate now? Is there a level of literacy in place that will provide reasonable justification for the computer use of the type of literacy based activities that take place in the adult world; adult or college classes, e-mail, Internet or online services for example? Has the person successfully used other computer access equipment in independent literacy based activities? Can you put the adult service providing agency in the role of using existing skills not building new skills?

Computer and other high tech equipment requests are generally investigated very thoroughly by adult service providing agencies because, sadly, in the past the equipment has been misused after it was placed in the

home. Unfortunately, it is not uncommon for a computer to be requested for a young adult starting only when the student has reached the transition stage.

I hope that you have a better understanding of why I have been placing so much emphasis on early intervention and implementation of equipment. It may seem like you have years and years to get things done if your child is in first or second grade. Don't fall into the trap of thinking that time is on your side-it isn't so! The years will fly past and before you know it you will be having to document skills in evidence.

Do not wait to start implementing assistive technology in your child's program. Do not wait to start using augmentative communication devices. To borrow a phrase ...just do it.

*Make an action plan and implement it.

*Go to vendor fairs and conferences.

*Get hands on experience.

*Bring trainers and specialists into your school or local area.

*Take your child's teachers and therapists to training.

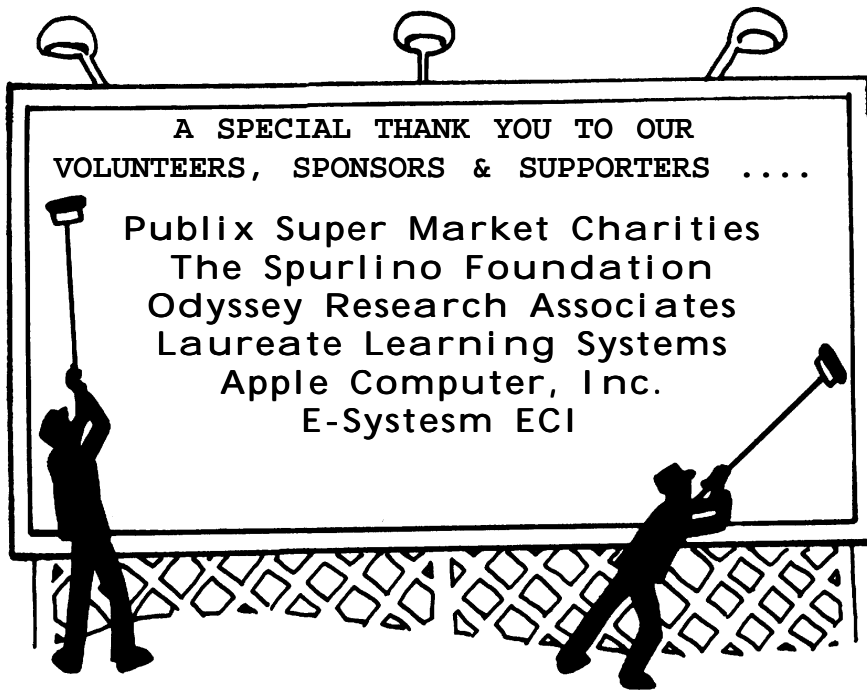
Conclusion

As we come to the end of our series on assistive technology in education, I hope that you have been able to see the strengths and weaknesses of your program, or your child's program and how that program fits into the overall system of assistive technology in education. I have enjoyed sharing information and experiences with you over the past several months. I am looking forward to my next series of articles for *DIRECTIONS*:

Technology in Special Education.

Editor's Note

Technology & Inclusion is a not-for-profit, tax exempt 501(c)(3) organization based in Austin, TX. Created by a small group of concerned parents and professionals in 1994, their vision was to establish an organization that would work with individuals with disabilities, their families and professionals with the ultimate goal being maximally inclusive service delivery-at school, at work and in the community. Jamie Judd-Wall is the Executive Director of this fine organization, and we thank her for her comprehensive and informative series on Assistive Technology in education. You can reach her at: 512-280-7235, or you can e-mail her at: jjuddwall@aol.com.



Did You Know?

Did you know that DREAMMS does not receive funding from any government agencies? Our organization receives its operating funds from individual and corporate donations, and by obtaining grants from foundations supporting our mission to provide assistance to families of children with disabling conditions.

Your donations help us to purchase office supplies like postage, paper, envelopes and toner, helps us to cover telecommunications and connect costs for our Web site, and allow us to purchase software for our publications and information packets. And, no salaries are paid out of these monies since we are all volunteers! Won't you help us out by sending a small donation to our corporate offices? It would surely help! Thanks!§

A brief summary of the guidelines by disability area follows.

For people with physical disabilities

People with physical disabilities can have a wide range of abilities and limitations. Some people may have complete paralysis below the waist but may have no disability at all with their upper body. Others may have weakness overall. Some may have very limited range of motion, but may have very fine movement control within that range. Others may have little control of any of their limbs, or may have uncontrolled, sporadic movements which accompany their purposeful movements, but may have consistent and controllable movement from the neck up. Some with arthritis may find that hand and other joint movement is both physically limited and limited by pain.

A physical disability, by itself, does not usually affect a person's ability to perceive information displayed on the computer screen. Access is generally dependent on being able to manipulate the interface.

Therefore, the accessibility of the software can be increased (both direct and via access features/software and hardware):

*by avoiding timed responses (less than 5-8 sec.) or allowing the response time to be changed;

*by providing keyboard access to all toolbars, menus, and dialog boxes (whose functions are not also in the menu);

*by not interfering with access features built into the operating system (e.g. StickyKeys, SlowKeys, Key Repeating etc.).

For people who are hard of hearing or deaf

Many users with hearing impairments need to have some method for adjusting the volume or for coupling the sounds more directly to their hearing aids. Both of these are hardware considerations and can be met with systems having volume controls and headphone or audio jacks. Users who have more severe hearing impairments may also use a combination of these techniques, as well as techniques for people who are deaf. Such techniques generally involve the visual display of auditory information.

Therefore, the accessibility of the software can be increased to users with hearing impairments:

*by providing all auditory information in a visual form as well;

*by ensuring that all visual cues are noticeable if one is not looking at the screen;

*by having a mode of operation that will work in noisy environments, or if sound is turned off;

*by supporting a ShowSounds feature if it exists in the operating system of the computer (a ShowSounds feature allows a user to specify that all sound should be accompanied by a visual event, including a caption for any spoken text which is not already presented on screen.).

In addition, product support people should be reachable via Text Telephones (also called TDD's or Telecommunications Devices for the Deaf), or through online services where computer interfaces can be utilized.

For people with color blindness

The compatibility of your software can be increased with access features/software:

*by making color coding redundant with other means of conveying information;

*by making sure that the program can operate in monochrome mode;

*by using colors which differ in darkness so that they can be distinguished by this as well as color.

For people with low vision

People with low vision may have any one of a number of problems with their vision ranging from poor acuity (blurred or fogged vision) to loss of all central vision (only see with edges of their eyes) to tunnel vision (like looking through a tube or soda straw) to loss of vision in different parts of their visual field, as well as other problems (glare, night blindness, etc.).

For people with low vision, a common way to access the information on the screen is to enlarge or otherwise enhance the current area of focus. Given this, the direct accessibility of your software can be increased

*by allowing the user to adjust the fonts, colors and cursors used in the program to make them more visible;

*by using a high contrast between text and background;

*by not placing text over a patterned background where the two might interfere with each other;

*by using a consistent or predictable

layout for screens and dialogs within the program;

*by providing access to tools, etc., via menu bar.

In addition, the compatibility of your software can be increased with low vision access features/software by using the system pointers wherever possible, as well as the system caret or insertion bar if one is available.

For people who are blind

Many people who are legally blind have some residual vision. This may vary from just an ability to perceive light to an ability to view things that are magnified. The best design for this group is therefore one that doesn't assume any vision but allows a person to make use of whatever residual vision they may have.

Access by people who are blind is usually accomplished using special screen reading software to access and read the contents of the screen, which is then sent to a voice synthesizer or dynamic Braille display. On computers which use a graphic user interface this is a bit tricky, but there are a number of things that application software developers can do to make it possible for people using screen readers to detect and figure out what is on the screen. These include:

*using the system tools wherever possible to;

1. draw and erase all text on the screen;
2. display all cursors and pointers;

*using the system standard controls whenever possible;

*drawing tools in tool bars, palettes and menus that are separate items (rather than one big graphic or toolbar) as this makes it possible for screen readers to identify the

number, location and shape of the individual tools so that they can be identified and named. The compatibility of the software can also be increased with screen readers using the following considerations:

*if text is embedded in a graphic image, using a special technique to make the text known to screen reading software;

*using consistent or predictable screen and dialog layouts;

*not using pop-up help balloons that disappear if the focus changes unless there is a way to lock them in place so that the focus (e.g., cursor) can be moved there to read them;

*using single column text whenever possible;

*giving controls logical names, even if the name is not visible on screen (screen readers can access this information and use it to describe the type and function of the control on the screen);

*providing keyboard access to all tools, menus, and dialog boxes.

Since screen readers can only read text (or give names to separately identifiable icons or tools) it is a good idea to:

*avoid unlabeled "hot spots" on pictures as a control scheme (unless redundant with menu selection);

*avoid non-text menu items when possible or incorporate cues (visible or invisible) (screen readers can 'see' text that is written to screen in an invisible color);

*avoid non-redundant graphic tool bars if possible.

Finally, the documentation and training materials can be made more accessible

*by designing all documentation and on line help so that it can be understood by reading the text only (e.g. information presented in pictures and graphics is also presented with a description in text);

*by providing synchronized running audio descriptions for all information presented as an animated graphic or movie.

For people with language or cognitive disabilities

This is perhaps one of the most difficult areas to address. Part of the difficulty lies in the tremendous diversity that this category represents. It includes individuals with general processing difficulties (mental retardation, brain injury, etc.), people with very specific types of deficits (short term memory, inability to remember proper names, etc.), learning disabilities, language delays, and more. In addition, the range of impairment within each of the categories can (like all disabilities) vary from minimal to severe, with all points in between. In general, software that is designed to be very user friendly can facilitate access to people with language or cognitive impairments.

Somewhat more specifically, the accessibility of your software can be increased

*by making sure that all messages and alerts stay on screen until they are dismissed;

*by making language as simple and straightforward as possible, both on screen and in the documentation;

Please see Software on Page 11

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Product Review

BOOKMAN Electronic Books

FUN-damental Dictionary

Franklin Learning Resources

1-800-BOOKMAN

The *FUN-damental Dictionary* from Franklin Learning Resources is a hand-held, comprehensive speaking and animated elementary dictionary that is ideal for young students or for young adults with developmental delays.

This amazing little electronic device (approximately 4" x 5" in size) includes 100,000 words from Merriam-Webster's Elementary Dictionary and pronounces 50,000 or those words for auditory reinforcement and verification. It also includes over 400 animated graphics and illustrations to visually identify words that have been typed in. The *FUN-damental Dictionary* also allows students to hear words that rhyme with their selected word, and provides 4 exciting educational word games. The dictionary also lets you modify the type size of the display! A great feature for kids who may have visual impairments. The *FUN-damental Dictionary* also comes as a "book card" title that snaps into the back cardslot of any of Franklin's electronic books to create a flexible and expandable electronic library.

Franklin Learning Resources offers a no-risk trial program with all of their electronic books. If you are not completely satisfied, you can return the product within 30 days for a full refund! Call them at the above number for a free catalog or for further information! §

Software Continued from Page 9

*by using simple and consistent screen layouts.

In addition, because print disabilities are more common among people with language and cognitive impairments, the accessibility of the software can be increased by ensuring that it is compatible with screen reading software. (See the section titled "For People Who Are Blind," above.)

Editor's Note

This article has been adapted from "Application Software Design Guidelines: Increasing the Accessibility of Application Software to People with Disabilities and Older Users". It was compiled by Gregg C. Vanderheiden, Ph.D. for software developers and released to facilitate input and comment from consumers, researchers and industry. To view the full article, go to the TRACE Research & Development Center Web page at: <http://www.trace.wisc.edu>, and search for "software".

Although written for developers and engineers, we have tailored this portion of the article so that it would be helpful to parents and teachers when finding and purchasing software for individuals with special needs. §

See You In Orlando!!

Woofing Continued from Page 3

programs without redundancy and omissions of functional skills and language.

Unit instruction with attention to speaking vocabulary provides several weeks of study on one topic thus giving the augmentative communication systems user time to practice listening to topical language use, modeling the language they have heard, responding to questions by the teacher to confirm their understanding of the lesson concepts, asking questions to clarify the information they are learning and opportunities to tell others what they have learned. If topics change daily this kind of practice is missed and the development of interactive communication skill so necessary to become a good communicator is lost.

No... Woofing isn't talking, but talking is only part of communicating.

For further information please contact:

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THE DREAM GOES ON!
From Vision to Reality

October 16-19, 1997
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New SLATS from AbleNet

MINNEAPOLIS, MN, AbleNet, Inc. has introduced three new models of their Switch Latch and Timer (SLAT), a product that allows switch users greater flexibility when controlling battery-operated toys, games and appliances.

Addition of a Single, Dual or Choice SLAT to a basic "battery system" (i.e., switch, battery device adapter and toy) allows the user with severe disabilities to: keep a toy or appliance on for 1 to 60 seconds with a single switch activation ("timed-seconds" mode*); keeps a toy or appliance on for 1 to 60 seconds with a single switch activation ("timed-minutes" mode*); turn a toy or appliance on with the first switch activation and off with the second activation ("latch" mode)
*The toy or appliance automatically turns off when the preset number of seconds/minutes has elapsed, even if the user continues to activate the switch.

AbleNet

1081 Tenth Avenue S.E.
Minneapolis, MN 55414-1312
800-322-0956

**EZ Phone**

WOOSTER, OH-EZ Phone is a new speakerphone that was designed by Prentke Romich Company (PRC) for people who cannot access a standard telephone. It can be operated by either a single or dual switch, or by any learning infrared device such as PRC's Scanning Director II, Director III, or DeltaTalker with IR.

You may build a new number, dial one from the 35 number directory, or redial the last number dialed. The volume can be adjusted by the operator, call waiting is supported, and there is a battery backup in case of a power failure. A Speech Output option gives audible prompts, permitting someone with a visual impairment to use the phone independently.

Prentke Romich Company
1022 Hey! Road
Wooster, OH 44691
800-262-1984

DigiVox 2 Released ..

PITTSBURGH, PA-Sentient Systems Technology, Inc. announces the release of a new line of communication devices for non-speaking individuals - DigiVox 2. These digitized speech devices offer more speech time, a greater number of programmable levels, and are lighter in weight than the company's original DigiVox products.

DigiVox 2 is the second generation product of the original DigiVox. DigiVox 2 provides many of the same features as the original DigiVox, and offers several new features, including: **More Communication Memory** - DigiVox 2 units are available with 16, 34, 70, 106, or 142 minutes of recording time; **Faster Communication** - Sequence prediction and several scanning options **are** designed to make communication quicker and easier for individuals; **Increased Portability** - Weighing less than 3 pounds, the DigiVox 2 is 29% lighter than the original DigiVox.

Sentient Systems Technology, Inc.
2100 Wharton Street
Pittsburgh, PA 15203
800-344-1778

 **DREAMMS**
for kids, Inc.
Assistive Technology Solutions
273 Ringwood Road • Freeville, NY 13068-9618

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