

Bridging the Gap Between Consumer and Products in Rehabilitation Medicine

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The Transdisciplinary Team

Computer Engineer

Family / Tutor / Caregiver

Rehabilitation Counselor

Assistive Technology Specialist

Service Coordinator

Fabrication/Adaptation Tech

Training Coordinator

Audiologists

Nurse Practitioners

Social Workers

Occupational Therapist

Speech-Language Pathologist

Prosthetists

Medical Consultants

Teachers/Special Educators

AT Equipment Vendors

Hearing Device Specialists

Physical Therapists

PATIENT

Occupational Therapist

- Assisting people people who are unable to function independently or are not functioning as independently as possible in the areas of daily living, work, play, and leisure.
- Independence is increased through functional activities that are meaningful to the individual.
- Occupational Therapists treat the whole person!

Assistive Technology: A Practical, Working Definitions

“Any object or tool that maximizes a person’s independence in activities of daily living.”

(Jacobs, K. 1997)

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Mobility
Self Care



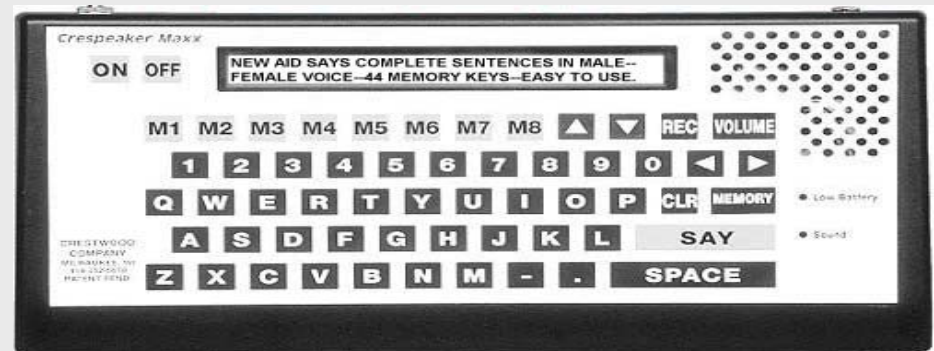
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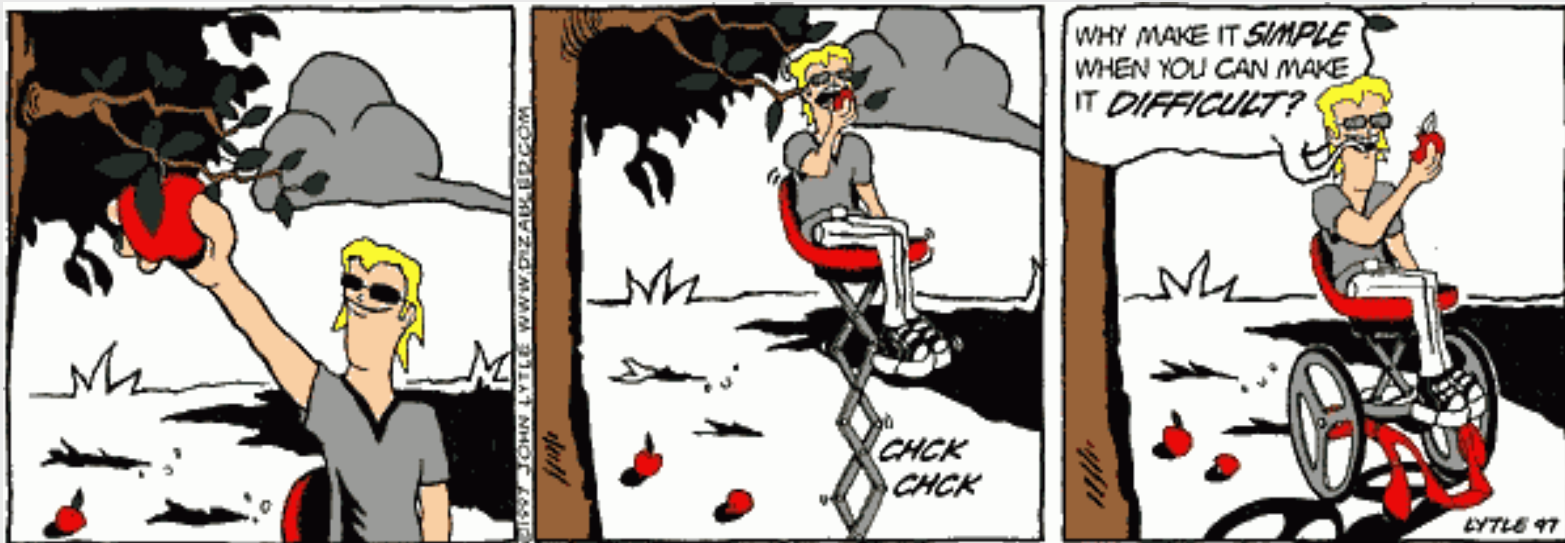
Communication

Leisure

Vocation



Levels of Assistive Technology



Levels of Assistive Technology: Some Practical, Working Concepts

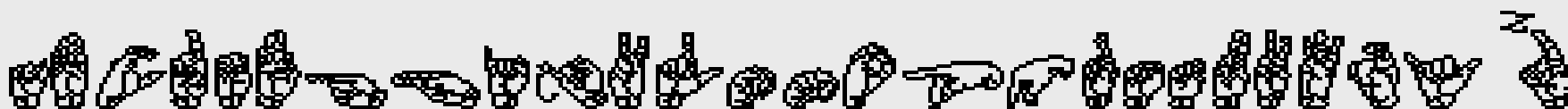
Low Technology Adaptation

➤ **Equipment that is easy to use and do not require electrical power. May require a short training period.**

❖ **Fingerspelling**

❖ **Scotting up and down stairs**

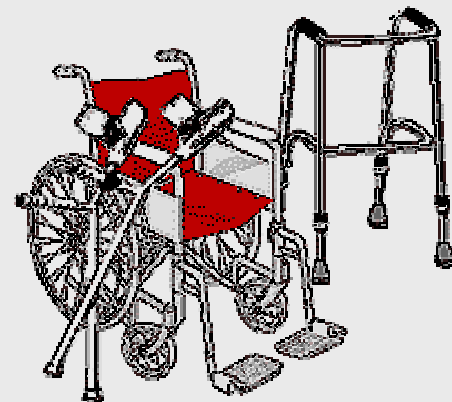
❖ **Velcro**



Levels of Assistive Technology: Some Practical, Working Concepts

Elementary Technology Devices

- Include most battery-operated devices. User requires a moderate training period.
- Off-the-shelf or inexpensive.
 - ❖ Basic wheelchair / walker
 - ❖ Built-up pen
 - ❖ Modified eating utensils

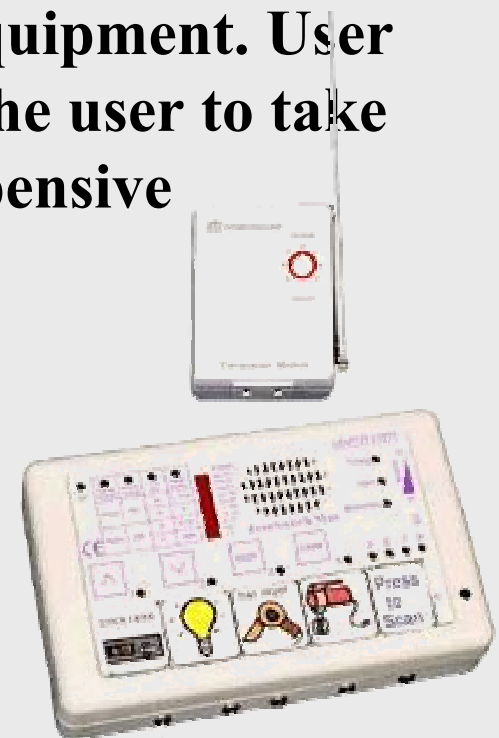


Levels of Assistive Technology: Some Practical, Working Concepts

High Technology Devices

- **Include complex and programmable equipment. User requires specific training in order for the user to take full advantage of their capabilities. Expensive**

- ❖ **Voice operated ECU**
- ❖ **Electric lifts**
- ❖ **Modified car / van controls**
- ❖ **Motorized wheelchair**



A Continuum of Considerations for Assistive Technology for the Mechanics of Writing

Regular pen or pencil

Pencil or pen with adapted grip

Adapted paper (e.g. raised line, highlighted lines)

Slant board to create slanted writing surface

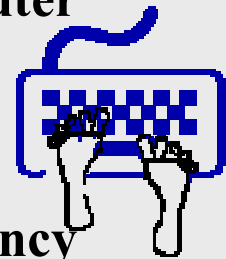
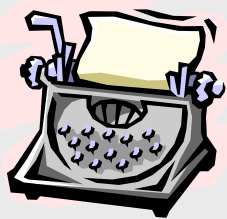
Typewriter

Portable note taker that interfaces with computer

Computer with word processing software

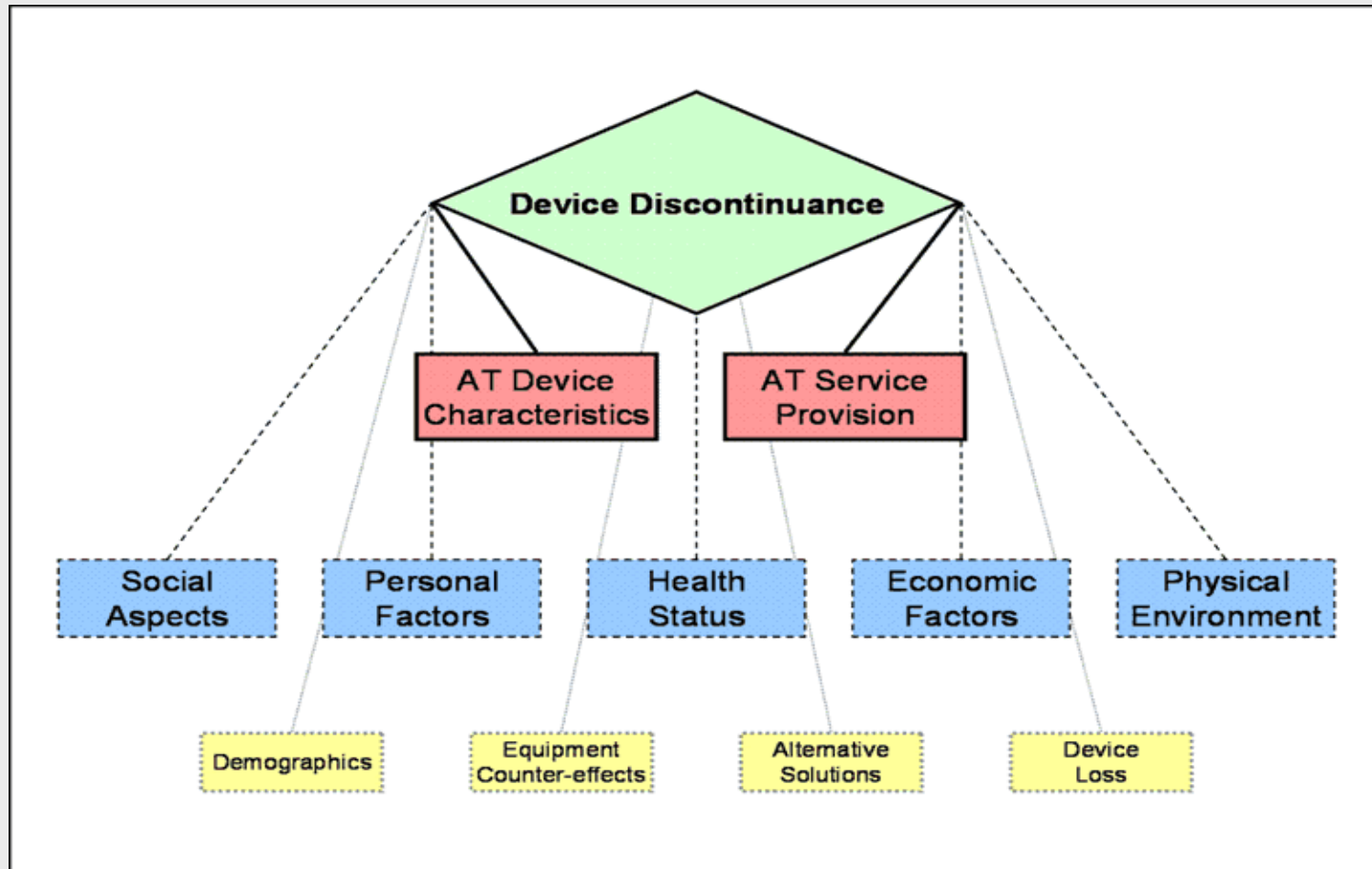
Word prediction/abbreviation expansion software for efficiency

Voice recognition software



(Adapted by ATTO from WATI, 1998)

Equipment Suitability



Steps Needed to Issue an Assistive Device

- **Selection of a device for an activity**
- **Site and method of instruction**
- **Time to introduce device during hospitalization**
- **Reinforcement of its use**
- **Written justification to insurance company**

Instruction in the Use of the Assistive Device

- **Repetition is key**
- **Types of instruction:**
 - ❖ **demonstration**
 - ❖ **practicing actual skills in hospital environment**
 - ❖ **written**
 - ❖ **video**
 - ❖ **in home training**

Reinforcement

Transition of skills to community / home environment

Follow-up

Support groups

Refresher training may be necessary

Who pays?

- **User**
- **Insurance**
 - Private**
 - managed care**
 - fee-for-services**
 - Medicare**
 - Medicaid**
- **VA**
- **Grants / Loans**

Access to Equipment and Rehabilitation Services

(Bingham and Beatty, 2003)

>50% needed assistive equipment in last 12 months
30% were unable to get needed equipment

40% needed rehabilitation services in last 3 months
>50% did not receive those services

Other resources

- **Cook and Hussey (2007), Assistive Technologies: Principles and Practice (3rd edition): Mosby**
- **Kraskowsky and Finlayson (2001). Factors Affecting Older Adults' Use of Adaptive Equipment: Review of the Literature, American Journal of Occupational Therapy 55, 303-310**

Website links

- <http://www.abledata.com/>
- <http://www.ncmedical.com/>
- [**http://global.smith-nephew.com/master/6600.htm**](http://global.smith-nephew.com/master/6600.htm)