

PEAT

The **P**lanning and **E**xecution **A**ssistant and **T**rainer

Attention Control Systems, Inc

www.brainaid.com



ATTENTION CONTROL SYSTEMS, INC.

COMPUTERIZED PLANNING FOR PEOPLE WITH COGNITIVE DISORDERS

Company Origins

- NASA and Valley Medical Center



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Customer Stories



SR – Teenager with Asperger's.
PEAT helps w/ morning routine

DG – Brain injury and dementia,
Morning PEAT planning,
Scheduling non-routine tasks,
Improving efficiency



MV – College student with Autism
4 year user. *PEAT manages
class and homework schedule*

VA – Veteran with brain injury,
Multiple Sclerosis, PTSD.
PEAT keeps him from overload



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Cognitive Disorders

Causes

Brain injury, Stroke, Alzheimer's, Multiple Sclerosis, Autism, Developmental disorders, Attention Deficit Disorder, others

Incidence

20 million in U.S.

- Seven percent of U.S. population
- Brain Injury - 5.3 million, 80k/yr, 2/3 younger than age 30
- Stroke - 4 million, 600k/year
- Alzheimer's Disease - 4 million
- Growing population as baby boomers age



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Cognitive Disorders

Effects

- Distractibility, Inflexibility, Poor time mgmt
- Impaired ability to plan and execute daily activities
- Often do not initiate or stop tasks on time
- Impaired attention, error detection and correction
- Difficulty adjusting to changes
- **Lost independence and employment**



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Current Aids

- Paper & pencil, Large calendars, Post-it notes
- Simple cueing & electronic calendar systems

Limited Effectiveness

- Users forget to look
- No planning or error correction
- Requires person to change schedule
- Confusing user interface
- Limited activity types and cueing options



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PEAT: The Planning and Execution Assistant and Trainer

- Handheld Cognitive Aid
- Automatic Planning and Cueing
- Floating Tasks and Scripts
- Specialized User Interface



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PEAT provides

Flexibility

- for operating in uncertain and changing situations

in Real-world activities

- daily living, health, travel, school, work

as a Personal Assistant

- planning, cueing, providing information

with a Customized Interface

- won't confuse or overwhelm



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Tools in the Toolbox

Activity Types (Planning options)

- Fixed** “I have a Speech appointment from 10-11am.”
- Floating** “I want to go shopping sometime this afternoon.”
- .
- Shrinking** “I want to exercise everyday for an hour. I will exercise less if a day is particularly busy, and I will skip it if I cannot exercise for at least 20 minutes.”



Tools in the Toolbox

Activity Types cont. (Planning options)

- Scripts** “I need to be reminded to put the clothes in the dryer, then to take them out again and again to put them away when I am done.”
- Choices** “I’ll decide in the morning whether to walk or take the bus.”
- Checklists** “My list of things I buy at the store or steps in doing my job”
- To Do** “I read the paper every day, but not at a specific time, and I don’t want to be cued for it.”



Tools in the Toolbox

Cueing Options for Tasks

- **When to Cue** – Beginning, Ending (or both)
- **What Sound to make**
 - 50+ built in sounds
 - Vibrate (on phone models)
 - Voice Recording
 - Silent when no cue is needed
 - Any WAV File
- **Wait Button** – “I need more time”
- **Cue Overrides**

Start or Stop early – “I’m ready now.”

Skip – “I’m not doing this.”

Mark as Already Done – “I’ve completed this.”



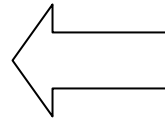
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Tools in the Toolbox

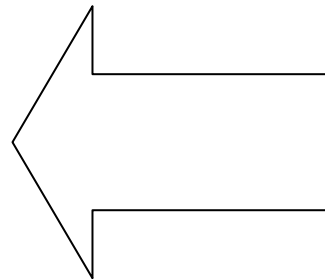
Easy Access to useful information

- **Name Cards** – The “Rolodex”
- **Note Cards** – The “Notebook”



Can be linked to tasks or to each other

- **Pictures**
- **Sounds**
- **Voice Recordings**
- **Locations**
- **Phone Numbers**



Can be linked to tasks as well as name and note cards



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Automatic Planning in Action

Calendar Menu

← Mon Jan 8 (Today) →

- 12:30 - 12:40p Bank
- 12:40 - 1:20p* Lunch
- 1:20 - 1:55p* Shopping
- 2 - 4p Movie with Susan
- 4 - 5p* Exercise
- 6 - 7p Dinner

Tools Mon 12:30p

Delay
at
Bank
for
15
min.

Calendar Menu

← Mon Jan 8 (Today) →

- 12:30 - 12:55p Bank
- 12:55 - 1:35p* Lunch
- 2 - 4p Movie with Susan
- 4 - 4:35p* Shopping
- 4:35 - 5:30p* Exercise
- 6 - 7p Dinner

Tools Mon 12:43p

BEFORE

AFTER



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Benefits

Better outcomes:

- Increased Independence
- Increased Quality of Life
- Decreased cost of care



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