



The recommended instantiation of CATS is with a compact workstation that requires no network connection. It requires a common 117 VAC outlet only. The system is essentially maintenance and overhead –free.

The workstation is intended to reinforce the clinical nature of the CATS process and minimize distractions during data collection.

CATS Administrators (i.e., Clinic Admins and Researchers) are provided with a separate utility program that will allow for User profiles to be accessed and managed.

The CATS can also be deployed on office computers and laptops running Windows operating systems.

Why use the **dxdt** Engineering and Research COGNITIVE ACUITY TRACKING SYSTEM?

- The system provides a window into clinical progress that can assist clinicians with process optimization.
- The system allows patients to track their progress and potentially provide encouragement can improve program retention and likelihood of long term success.
- Researchers can use the system as an objective tool for answering questions about interventions and prognoses.



dxdt Engineering and Research

The Joseph Albert Hekimian Legacy Fund

About the Joseph Albert Hekimian Legacy Fund and **dxdt** Engineering and Research:

The Joseph Albert Hekimian Legacy Fund is committed to assisting individuals as they work to triumph over substance abuse addiction. The Legacy Fund has partnered with dxdt Engineering and Research to develop the Cognitive Acuity Tracking System. dxdt Engineering and Research has earned two patents in the healthcare field and has developed several new products and technologies in the fields of healthcare and medicine.

To learn more about the Cognitive Acuity Tracking System (CATS) or to acquire the system, contact:

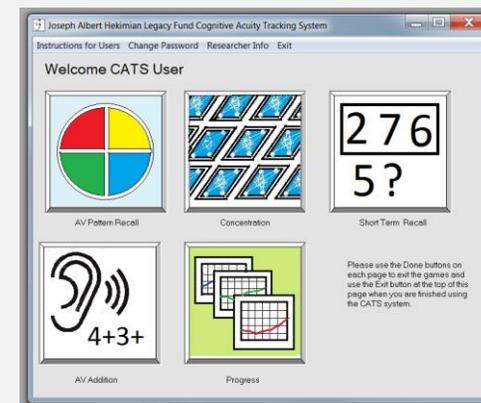
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Learn more about the Joseph Albert Hekimian Legacy Fund at:

www.JosephAHekimianLegacy.org

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COGNITIVE ACUITY TRACKING SYSTEM

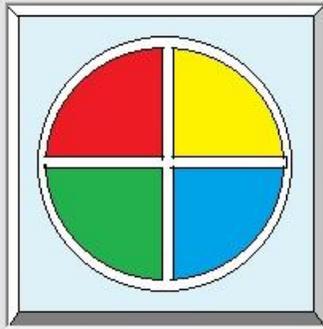


Main Screen of dxdt's Cognitive Acuity Tracking System (CATS)

The **dxdt** Engineering and Research Cognitive Acuity Tracking System (CATS) allows Users to monitor improvements and degradation of cognitive abilities over time using simple and quick games and exercises.

Use CATS to:

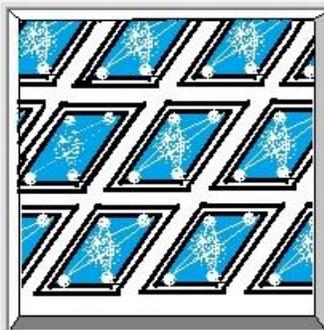
- Track brain health for Individuals engaged in addiction recovery or recovery from stroke, traumatic brain injury;
- Monitor the brain health of patients including those with early onset Alzheimer's or dementia. Collect program metrics and Increase program retention.
- Objectively study the effects of interventions designed to improve brain health.



AV Pattern Recall

Each CATS User has their own password protected account through which they access the CATS games, exercises and progress report page.

CATS uses fun games and mental exercises to track and monitor cognitive acuity. One game is the audio and visual pattern recall game. This game is ideal for measuring short term recall ability in a multi-sensory context. The score is based on how long the User can continue to reproduce the random patterns presented by the game.

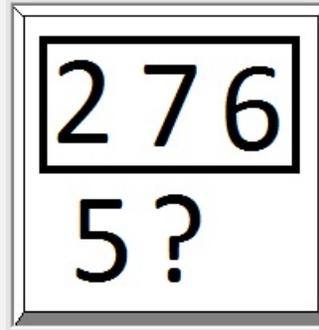


Concentration

Another game is based on the card game concentration. The User is faced with an array of 36 cards laying face down.

Cards are turned over one at a time and the User attempts to recall where pairs matching cards are located. This game is ideal for measuring the ability to recall multiple factors at a time in a visual context. The score is based on the number of turns it takes to locate all of the card pairs.

Both of these games are fun to play and are based on once popular family games.



Short Term Recall

The short term recall game presents sets of numbers to the User and then asks the User whether a specific number was in the sequence. This exercise measures attention span and single factor short term recall ability. Short term recall is a cognitive ability that is closely correlated with the use of some commonly abused drugs and is dynamic in terms of the rate in which the ability can improve in the absence of the aggravating drug.

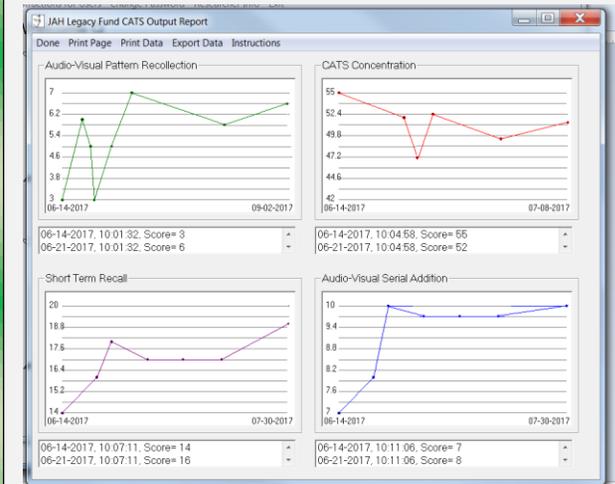
CATS Protects Privacy

Users set up profiles associated with a username and a password that they use each time they use the CATS. The private accounts allow each user privacy as they challenge themselves using the scorekeeping games and exercises included in CATS.



AV Addition

The audio-visual addition module presents the User with a sequence of numbers to be added mentally. The metric is the proportion of correctly added sequences relative to the total number of trials. The exercise tests the more complex cognitive functions associated with attention, memory and computation.



The reporting page shows trends for each game and exercise separately in plot and tabular form. Users can easily see how their cognitive acuity scores have changed over time. Export of data files is easy and dxdt can provide useful analytical tools for Researchers.