

fatigue scale, mood scale, simple and two-choice reaction time, four choice reaction time, procedural reaction time, Sternberg memory search task, running memory continuous performance task, mathematical processing task, digit set comparison task, logical reasoning-symbolic, Tower of Hanoi (Tower Puzzle), Stroop color/word interference, code substitution (learning and recall), spatial processing task (simultaneous and successive), matching to sample (simultaneous and successive), matrix rotation (simultaneous and successive), tracking (unstable and adaptive), pursuit tracking, switching task, dual task, synthetic work task, tapping (left and right index finger), mental status test, and Aphasia test.

[0022] The interpretive and report modules of the exemplary embodiment of the present invention are customized for specific test batteries and applications. The interpretive modules use a variety of criteria for evaluating test performance including demographic norms, clinical subgroup norms, and the subject's own past performances. The Cognitive Status Report (CSR) reports provide immediate feedback when a test battery is completed.

[0023] The assessment and rehabilitative system is accompanied by a set of associated component utilities that may be utilized on a host computer. These utilities include communications and data archiving modules and test battery authoring modules. The communications and data archiving modules include programs for retrieving data from the hand held computer, for archiving data in formats compatible with Microsoft Access, Excel, and Oracle, for providing functions for assessing data quality and integrity, and for installing and managing test batteries on the hand held computer. The test battery authoring modules are utilized for configuration of customized test batteries for specific applications. The test battery authoring modules select tests from available test modules, set test sequences and set test options. These customized test batteries are then installed on the handheld computer using a special-purpose utility program.

BRIEF DESCRIPTION OF THE DRAWINGS

[0024] The present invention will be better understood from the following detailed description of a preferred embodiment of the invention, taken in conjunction with the accompanying drawings in which like reference numerals refer to like parts and in which:

[0025] FIG. 1 is a block diagram of the Neuropsychological/NeuroCognitive and Psychomotor Assessment and Rehabilitation Performance System of the preferred embodiment of the present invention;

[0026] FIG. 2 is an illustration of a personal digital assistant (PDA) for use with an ANAM Readiness Evaluation System (ARES) of a preferred embodiment;

[0027] FIG. 3 is a diagram of a log in view screen for a preferred embodiment of an ANAM Readiness Evaluation System;

[0028] FIG. 4 shows an options screen for a preferred embodiment of an ANAM Readiness Evaluation System;

[0029] FIG. 5 illustrates an ARES subject database view screen;

[0030] FIG. 6 illustrates an ARES edit subject view screen;

[0031] FIG. 7 illustrates a mathematical processing instruction view screen;

[0032] FIG. 8 illustrates an identification view screen;

[0033] FIG. 9 shows a password view screen;

[0034] FIG. 10 shows an administration functions view screen;

[0035] FIG. 11 shows a demonstration single test view screen;

[0036] FIG. 12 shows a database manager view screen;

[0037] FIG. 13 illustrates stimulus sets of a code substitution test of an assessment and rehabilitation system of the preferred embodiment;

[0038] FIG. 14 shows symbol digit pairings for the code substitution test;

[0039] FIG. 15 illustrates a default parameters table for the ARES tests of a preferred embodiment;

[0040] FIG. 16 illustrates a desktop window display of the ARES data management data;

[0041] FIG. 17 illustrates a desktop window display of the ARES data management subject information;

[0042] FIG. 18 illustrates an ARES data management battery manager screen; And

[0043] FIG. 19 shows an ARES data management data plotting screen.

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0044] The following detailed description utilizes a number of acronyms which definitions are typically provided with the first instance of each acronym. For convenience, Table 1 below provides a list of the acronyms and abbreviations and their respective definitions.

TABLE 1

ACRONYMS AND ABBREVIATIONS	
ACRONYM	DEFINITION
ANAM	Automated Neuropsychologic Assessment Metrics
ARES	ANAM Readiness Evaluation System
CSR	Cognitive Status Report
IMP	Impulsive Responses
ISI	Interstimulus Interval
OS	Operating System
PDA	Personal Digital Assistant
PIN	Personal Identification Number

[0045] FIG. 1 illustrates a computerized Neuropsychological/NeuroCognitive and Psychomotor Performance Assessment and Rehabilitation System 100 which is a cognitive testing system designed for use on a handheld computer system 102. Components of the system 100 include an executive program 104, test modules 106, registration modules 108, interpretive modules 110, report modules 112, and supporting utilities 114. The system 100 is designed for point-of-use interpretations and reports of results in clinical settings, occupational medicine, and research. The system 100 is used in medical applications as a diagnostic, evaluation, and treatment instrument. In industrial settings, the system 100 can be used as a fitness/readiness for work assessment. The system 100 also contains modules for use in forensic mental competency, mental and emotional status examinations.

[0046] The system 100 is designed to operate on handheld computers 102 such as Palm Operating System (OS) and Microsoft Windows CE and Merlin compatible Personal Digital Assistants (PDAs). The handheld computer 102 of the preferred embodiment is a PDA that utilizes the Palm Operating System (OS), Version 3.5, or later. The system 100 is