EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS
Example: NON-FUNCTIONAL DESCRIPTIVE MATERIAL

Disclosure

The specification discloses data files containing a number of visual images stored in the memory of a computer. The specification discloses that these data files are organized in such a manner to allow the user to retrieve the data in a more efficient manner than was previously possible. Further, the specification discloses that the disclosed organization is useful in many environments, specifically for computer assisted hair styling and selection. The invention allows the hair dresser to show clients how their hair will look after the proposed styling is completed by the hair dresser.

The specification discloses the use of specifically placed cameras and a computer to receive and process the information and store the views. The computer uses at least two view files to create an image on a display. Applicant states that the storage allows the data to be manipulated quickly and easily to produce an image in real time on a laptop computer display.

The specification includes a complete and proper disclosure with respect to the organization of the data in the memory and the manipulation of the data to produce the view.

Claim

A computer memory product having stored thereon a digital data file, said memory product comprising:

a. a computer readable memory; and

b. a data file including:

1. at least two digital data portions;

2. a first digital data portion containing data representing visual images from a first location; and

3. a second digital portion containing data representing visual images from a second location wherein the second location is different from the first location.

Table for Claim

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program*per se*?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure*per se*?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	YES	GoTo: END	Note 3
	Q.6d. Is claimed invention a natural phenomenon?		GoTo:	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?		GoTo:	
BOX 9	Q.9. Is claimed invention a product for performing a process?		GoTo:	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?		GoTo:	
BOX 12	Q.12a. Does process have post-computer process activity?		GoTo:	
	Q.12b. Does process have pre-computer process activity?		GoTo:	
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?		GoTo:	
	Q.13b. Does process solve math problem w/o limitation to a practical application?		GoTo:	

Table Notes for Claim

Note 1: Disclosed invention allows hairdresser to show client how a particular hair style will look on the client.

Note 2: Disclosed invention uses a computer system.

Note 3: Claimed invention recites data embodied on a computer-readable medium. However, the data does not impart functionality to either the data as claimed or to the computer. As such, the claimed invention recites non-functional descriptive material, *i.e.*, mere data. Non-functional descriptive material stored on a computer-readable medium is merely carried on the medium, it is not structurally and functionally interrelated to the medium. The allowance of such a claim would exalt form over substance. *See* Guidelines Section IV.B.1(a)-(b). The claim should be rejected under 35 U.S.C. § 101.
THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

Disclosure

The disclosure recites use of a general purpose digital computer for determining patient billing and record keeping in a doctor's office. A broad general description of the computer is given with specific mention of keyboard and light pen input devices. The light pen input device is used to scan a menu of charges associated with various medical procedures performed for the patient to assist in generating patient billing documents. The drawings show the general block diagram of a computer and include several figures of flowcharts outlining the procedures that the computer is to follow to keep records and generate the invoices. The specification merely describes the general functions that the application software is to direct the computer to perform. No specific software is disclosed and the disclosure indicates that any computer program performing the stated functions can be employed with the general purpose digital computer. The level of skill in the art would permit a routineer in the art to practice the invention without undue experimentation.

Claim

A computer program for controlling a computer, the program comprising:

a. means for directing the storage of individual patient records and the periodic updating of the individual patient records;

b. first subroutine means responsive to the means for directing for initiating the creation of patient invoices from the patient records; and

c. second subroutine means for initiating the printing of said patient invoices and records.

Table for Claim

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program*per se*?	YES	GoTo: END	Note 3
	Q.6b. Is claimed invention a data structure*per se*?		GoTo:	
	Q.6c. Is claimed invention non-functional descriptive material?		GoTo:	
	Q.6d. Is claimed invention a natural phenomenon?		GoTo:	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?		GoTo:	
BOX 9	Q.9. Is claimed invention a product for performing a process?		GoTo:	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?		GoTo:	
BOX 12	Q.12a. Does process have post-computer process activity?		GoTo:	
	Q.12b. Does process have pre-computer process activity?		GoTo:	
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?		GoTo:	
	Q.13b. Does process solve math problem w/o limitation to a practical application?		GoTo:	

Table Notes for Claim

Note 1: Disclosed invention maintains patient billing and record-keeping system for a doctor's office.

Note 2: Disclosed invention uses general purpose computer system.

Note 3: Claimed invention is unclear as to whether it claims a computer program *per se* or a computer program embodied on a computer-readable medium. In particular, the preamble phrase "computer program" defines a set of instructions for execution on a computer, *i.e.*, a computer program *per se*. The body of the claim, however, recites means plus function language which defines at least a set of instructions embodied on a computer-readable medium to perform the recited functions. The claim should be rejected under 35 U.S.C. § 112, ¶ 2 for failure to distinctly point out and claim the invention.

The claim should also be rejected under 35 U.S.C. § 101. One reasonable interpretation of the claim is that it recites a computer program *per se*. A computer program *per se* does not define any structural and functional interrelationships that permit the computer program's functionality to be realized. *See* Guidelines, Section IV.B.1(a)-(b).
THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS
Example: SPECIFIC MANUFACTURE DEFINED BY STRUCTURE

Disclosure

The specification sets forth a video disc for a computer controlled optical image reproducing system having a storage track formed of pits alternating with lands along a spiral path. The pit depth introduces a phase change between portions of a reading beam that impinge upon pits and portions that impinge upon lands adjacent the pits. The invention is directed to the structure of video discs for use in the optical image reproducing system and concerns an improvement in the disc which facilitates tracking control of the reading beam.

Systems of this type perform satisfactorily, at least from a theoretical viewpoint, but in practice experience difficulty because irregularities and eccentricities which are always encountered result in tracking misregistration of the reading beam. Disc structures of the prior art have not permitted the facility of tracking adjustment that is possible with discs embodying the present invention.

The specification contains multiple drawings of the disc structure and disclosure of the determination of tracking from the structure of the disc.

Claim

An article of manufacture for use in a computer controlled optical image reproducing system of the type in which information stored in a record track of a carrier is read by scanning said track with a beam of light, comprising:

> a record disk having a record track composed of pits alternating with lands and in which the depth dimension of said pits introduces a phase change between portions of said beam which impinge upon said pits and portions of said beam which impinge upon lands adjacent said pits, whereby the orientation of the pits and lands facilitates tracking registration as the disk is scanned by said beam.

Table for Claim

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program*per se*?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure*per se*?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	NO	GoTo: Q.9	
BOX 9	Q.9. Is claimed invention a product for performing a process?	YES	GoTo: Q.10	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?	YES	GoTo: END	Note 3
BOX 12	Q.12a. Does process have post-computer process activity?		GoTo:	
	Q.12b. Does process have pre-computer process activity?		GoTo:	
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?		GoTo:	
	Q.13b. Does process solve math problem w/o limitation to a practical application?		GoTo:	

Table Notes for Claim

Note 1: Disclosed invention improves tracking in video disc used in optical image reproduction system.

Note 2: Disclosed invention uses computer system.

Note 3: Claimed invention recites specific manufacture (record disc) with specific physical structure (pits alternating with lands). *See* Guidelines, Section IV.B.2(a)(ii).
THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

Disclosure

The disclosure recites use of a general purpose digital computer for determining patient billing and record keeping in a doctor's office. A broad general description of the computer is given with specific mention of keyboard and light pen input devices. The light pen input device is used to scan a menu of charges associated with various medical procedures performed for the patient to assist in generating patient billing documents.

The drawings show the general block diagram of a computer and include several figures of flowcharts outlining the procedures that the computer is to follow to keep records and generate the invoices. The specification merely describes the general function that the application software is to direct to computer to perform. No specific software is disclosed and the disclosure indicates that any computer program performing the stated functions can be employed with the general purpose digital computer. The level of skill in the art would permit a routineer in the art to practice the invention without undue experimentation.

Claim

A computer program product for controlling a computer, the program product comprising:

a. a recording medium readable by the computer;

b. means recorded on the recording medium for directing the computer to store individual patient records and to update the individual patient records periodically;

c. first subroutine means responsive to the means for directing for creating patient invoices from the patient records; and

d. second subroutine means for causing the printing of said patient invoices and records.

Table for Claim

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program*per se*?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure*per se*?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	NO	GoTo: Q.9	
BOX 9	Q.9. Is claimed invention a product for performing a process?	YES	GoTo: Q.10	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?	NO	GoTo: Q.12a	Note 3
BOX 12	Q.12a. Does process have post-computer process activity?	NO	GoTo: Q.12b	Note 4
	Q.12b. Does process have pre-computer process activity?	NO	GoTo: Q.13a	
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?	NO	GoTo: Q.13b	
	Q.13b. Does process solve math problem w/o limitation to a practical application?	NO	GoTo: END	Note 5

Table Notes for Claim

Note 1: Disclosed invention maintains patient billing and record-keeping system for a doctor's office.

Note 2: Disclosed invention uses general purpose computer system.

Note 3: Claimed invention encompasses any and every manufacture embodiment of the underlying process. Means b. recites means for directing. The specification discloses any computer program based on the written descriptions and flow charts. It does not disclose specific hardware, specific software, or a combination thereof for performing this function. Means c. recites subroutine means for creating. The specification discloses the creation of computer programs based on the written descriptions and disclosed flow charts. It does not disclose specific hardware, specific software, or a combination thereof for performing this function. Means d. recites subroutine means for causing printing. The specification discloses the creation of computer program based on the written descriptions and disclosed flow charts. It does not disclose specific hardware, specific software, or a combination thereof for performing this function.

Note 4: Means d. does not define an act outside the computer as required for post-computer process activity. See Guidelines Section IV B.2(b)(i). The computer in the phrase "outside the computer" means beyond the printer.

Note 5: Claimed invention is limited to practical application of storing and updating patient records in a computer system.
THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

Disclosure

The disclosure recites the use of a PC of the 486 variety for performing wordprocessing edits in various colors. The applicant asserts that the practical utility of the invention is an automated wordprocessor when used with a general purpose computer. The applicant admits that the process of performing wordprocessing edits in various colors is known in the prior art but alleges that the disclosed computer program improves the speed of that process. A broad general description of the computer is given with specific mention of a keyboard and display monitor. The computer also includes a read only memory which is encoded with a specific application program that directs the wordprocessing editing process.

A specific program listing which shows the program code is provided as an appendix to the written description. This is the only disclosed embodiment of the invention. The written description includes a high level description of the program and flowcharts that show the specific steps performed by the program. This disclosure is clearly stated to be for explanatory purposes only and to aid in understanding the operation of the specific software embodiment. There is correspondence between the program, established clearly in the flowcharts, and the means plus function limitations recited in the claim. The disclosure indicates that invention includes both a wordprocessing system and a computer read only memory encoded with the specific program code which is functionally related to and changes the configuration of the memory. All aspects of the disclosure properly comply with the requirements of 35 USC § 112, first paragraph.

Claim

A computer read only memory for directing a wordprocessing editing operation on the computer, said memory including:

a. means for specifying a start position of a character or character string to be highlighted on a display screen of the computer;

b. means for specifying an end position of the character or character string to be highlighted on the display screen;

c. means for selecting a color for the specified character or character string to be highlighted; and

d. means for modifying the character or character string specified by the specified start position and the specified end position with the selected color information for display.

Table for Claim

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program*per se*?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure*per se*?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	NO	GoTo: Q.9	
BOX 9	Q.9. Is claimed invention a product for performing a process?	YES	GoTo: Q.10	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?	YES	GoTo: END	Note 3
BOX 12	Q.12a. Does process have post-computer process activity?		GoTo:	
	Q.12b. Does process have pre-computer process activity?		GoTo:	
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?		GoTo:	
	Q.13b. Does process solve math problem w/o limitation to a practical application?		GoTo:	

Table Notes for Claim

Note 1: Disclosed invention performs edits in a word-processing program.

Note 2: Disclosed invention uses computer system.

Note 3: Claimed invention recites specific software. The means plus function limitations correspond to specific program code segments for performing the function. *See* Guidelines, Section IV.B.2(a)(ii). THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

Example: ANY AND EVERY MANUFACTURE DEFINED BY SPECIFIC MEMORY AND ANY AND EVERY SOFTWARE IMPLEMENTATION OF A PROCESS

Disclosure

The disclosure recites the use of a PC of the 486 variety for performing wordprocessing edits in various colors. The applicant asserts that the practical utility of the invention is an automated wordprocessor when used with a general purpose computer. A broad general description of the computer is given with specific mention of a keyboard and display monitor. The computer also includes a read only memory which is encoded with a specific application program that directs the wordprocessing editing process.

A specific program listing which shows the program code is provided as an appendix to the written description. The written description includes a high level description of the program and flowcharts that show the specific steps performed by the program. There is correspondence between the program, established clearly in the flowcharts, and the means plus function limitations recited in the claim. The specification discloses that the program listing is the preferred embodiment of the disclosed invention. However, the disclosure also indicates that various other software can be employed to implement the functionality embodied in the high level description and flowcharts. The disclosure indicates that the invention includes both a wordprocessing system and a computer read only memory encoded with the specific program code. All aspects of the disclosure properly comply with the requirements of 35 USC § 112, first paragraph.

Example: ANY AND EVERY MANUFACTURE DEFINED BY SPECIFIC MEMORY AND ANY AND EVERY SOFTWARE IMPLEMENTATION OF A PROCESS

Claim

A computer read only memory for directing a wordprocessing editing operation on the computer, said memory including:

a. means for specifying a start position of a character or character string to be highlighted on a display screen of the computer;

b. means for specifying an end position of the character or character string to be highlighted on the display screen;

c. means for selecting a color for the specified character or character string to be highlighted; and

d. means for modifying the character or character string specified by the specified start position and the specified end position with the selected color information for display.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: ANY AND EVERY MANUFACTURE DEFINED BY SPECIFIC MEMORY AND ANY AND EVERY SOFTWARE IMPLEMENTATION OF A PROCESS

Table for Claim

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program*per se*?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure*per se*?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	NO	GoTo: Q.9	
BOX 9	Q.9. Is claimed invention a product for performing a process?	YES	GoTo: Q.10	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?	NO	GoTo: Q.12a	Note 3
BOX 12	Q.12a. Does process have post-computer process activity?	NO	GoTo: Q.12b	
	Q.12b. Does process have pre-computer process activity?	NO	GoTo: Q.13a	
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?	NO	GoTo: Q.13b	
	Q.13b. Does process solve math problem w/o limitation to a practical application?	NO	GoTo: END	Note 4

Example: ANY AND EVERY MANUFACTURE DEFINED BY SPECIFIC MEMORY AND ANY AND EVERY SOFTWARE IMPLEMENTATION OF A PROCESS

Table Notes for Claim

Note 1: Disclosed invention performs edits in a word-processing program.

Note 2: Disclosed invention uses computer system.

Note 3: Claimed invention encompasses any and every manufacture embodiment of the underlying process. Means a. recites means for selecting a start position. The specification discloses specific software in a preferred embodiment. It also discloses the creation of alternate computer programs based on the high-level written descriptions and disclosed flow charts. Means b. recites means for selecting an end position. The specification discloses specific software in a preferred embodiment. It also discloses the creation of alternate computer programs based on the high-level written descriptions and disclosed flow charts. Means c. recites means for selecting. The specification discloses specific software in a preferred embodiment. It also discloses the creation of alternate computer programs based on the high-level written descriptions and disclosed flow charts. Means d. recites means for modifying. The specification discloses specific software in a preferred embodiment. It also discloses the creation of alternate computer programs based on the high-level written descriptions and disclosed flow charts.

Note 4: Claimed invention is limited to practial application of performing edits in a word-processing system.
THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS
Example: ANY AND EVERY MACHINE IMPLEMENTATION OF A PROCESS NOT LIMITED TO PRACTICAL APPLICATION

Disclosure

The disclosure is directed to an apparatus for cancelling an error in a data signal. The disclosure sets forth an algorithm which is based on the well known least squares fit analysis to determine an offset value for manipulating the received data. The specification generally discloses a means for receiving and processing the data. The processing means manipulates the signal to cancel an error or other large deviations in the data. The means for processing the data does not immediately correct the error in the signal. The processing means waits for one cycle of the signal to pass before correcting the signal. This is disclosed as necessary to reduce the affect of spurious noise which may have been in the signal. These means are shown in block diagrams in the drawings and briefly described in the text of the specification. The functional blocks in the diagrams correspond to the claimed means. The disclosure states that it would be a matter of routine skill to select an appropriate computer system and implement the correction process on that computer system. No more specific disclosure of the claimed "means" is set forth, i.e., no computer program or logic circuits. The disclosure does describe how to implement the correction process. The data signal is not representative of any physical object or activities external to the computer system.

Example: ANY AND EVERY MACHINE IMPLEMENTATION OF A PROCESS NOT LIMITED TO PRACTICAL APPLICATION

Claim

An apparatus for processing a data signal comprising:

a. means for receiving the data signal from a source;

b. means for determining the value of the data signal at a plurality of instances; and

c. means for processing the plurality of values according to a modified least squares fit analysis.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS
Example: ANY AND EVERY MACHINE IMPLEMENTATION OF A PROCESS NOT LIMITED TO PRACTICAL APPLICATION

Table for Claim

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program*per se*?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure*per se*?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	NO	GoTo: Q.9	
BOX 9	Q.9. Is claimed invention a product for performing a process?	YES	GoTo: Q.10	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?	NO	GoTo: Q.12a	Note 3
BOX 12	Q.12a. Does process have post-computer process activity?	NO	GoTo: Q.12b	
	Q.12b. Does process have pre-computer process activity?	NO	GoTo: Q.13a	Note 4
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?	NO	GoTo: Q.13b	
	Q.13b. Does process solve math problem w/o limitation to a practical application?	?	GoTo: END	Note 5

Example: ANY AND EVERY MACHINE IMPLEMENTATION OF A PROCESS NOT LIMITED TO PRACTICAL APPLICATION

Table Notes for Claim

Note 1: Disclosed invention cancels an error in a data signal.

Note 2: Disclosed invention uses computer system.

Note 3: Claimed invention encompasses any and every machine embodiment of the underlying process. Means a. recites means for receiving. The specification discloses use of a general purpose computer system. It does not disclose specific hardware, specific software, or a combination thereof for performing this function. Means b. recites means for determining. The specification discloses use of a general purpose computer system. It does not disclose specific hardware, specific software, or a combination thereof for performing this function. Means c. recites means for processing. The specification discloses use of a general purpose computer system. It does not disclose specific hardware, specific software, or a combination thereof for performing this function.

Note 4: Means a. merely provides the data signal for use in the mathematical operation of means b. and c. It does not measure physical objects or activities. *See* Guidelines, Section IV.B.2(d)(ii).

Note 5: Claimed invention is not limited to a practical application. Means b. and c. are a sequence of mathematical operations for processing values in accordance with a least squares fit analysis. As noted above, means a. merely provides the data signal. Viewed as a whole, the claimed invention merely converts one set of numbers into another set of numbers. *See* Guidelines, Section IV.B.2(c) and (d). The claim should be rejected under 35 U.S.C. § 101.
THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

Disclosure

A cache management system for a computer system having a central processing unit, a main memory (RAM), and cache memory including a memory management unit for transferring page size blocks of information, apparatus for reading information from main memory, apparatus for writing information to the cache memory, and apparatus for overlapping the write of information to the cache memory to occur during the read of information from the main memory. The specification discloses the invention in block diagram form in the drawings with the details of the functions of the blocks described in detail. The controller is described in detail as to the specific hardware embodiment containing counters and control circuitry to provide the high speed control and information transfer which is not adequately performed by a software embodiment. The specification describes the hardware control circuitry to be formed on a standard gate array or programmed logic array.

The specification discloses that the acquisition of data from memory is the slowest link in the processing of data. Therefore a cache or high speed memory is implemented to reduce the slower main memory accesses needed during processing of data. The present invention increases the speed of operation of computer systems and further increases the performance of the computer system which utilizes cache memory which is filled in relatively large increments.

The present invention is implemented in a computer system which utilizes a cache memory which is filled from main memory in blocks equivalent to a page of main memory, which utilizes a memory management unit rather than a tag memory to accomplish the access of the cache memory, which includes a counter to sequentially write information into the cache memory during the access of main memory after a cache miss, and which utilizes a novel arrangement for controlling the memory management arrangement in order to eliminate a substantial number of main memory accesses to accomplish cache fills. The memory management determines the actual addresses of the data from the virtual addresses to locate the data in memory.

Claim

In a computer system having a central processing unit coupled to a main memory and a cache memory wherein blocks of said main memory are organized as pages having a predetermined number of bytes, a cache management system comprising:

a. a memory management unit including counters and control circuitry integrated with said central processing unit for assigning virtual addresses to data stored in said cache memory and for transferring page sized blocks of data from said main memory to said cache memory by a read operation on said main memory and a write operation on said cache memory, said virtual addresses being used by said memory management unit to determine whether data being addressed by said central processing unit is located in said cache memory or said main memory; and

b. an interface unit coupled to said memory management unit, said cache memory and said main memory to determine whether data at an address which is required to be accessed by said central processing unit is not in said cache memory, and for such data, to commence said read operation, and prior to completion of said read operation, to commence said write operation such that said data being read from said main memory is substantially simultaneously written to said cache memory;

said interface unit comprising a counter; an initializing circuit to start said counter with a start address within said cache memory to which a first byte read from said main memory is to be written; and an increment signal to increment said counter as said data is being read from said main memory for writing to said cache memory until a complete page has been written.

Table for Claim

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program*per se*?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure*per se*?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	NO	GoTo: Q.9	
BOX 9	Q.9. Is claimed invention a product for performing a process?	YES	GoTo: Q.10	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?	YES	GoTo: END	Note 3
BOX 12	Q.12a. Does process have post-computer process activity?		GoTo:	
	Q.12b. Does process have pre-computer process activity?		GoTo:	
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?		GoTo:	
	Q.13b. Does process solve math problem w/o limitation to a practical application?		GoTo:	

Table Notes for Claim

Note 1: Disclosed invention improves performance of computer system.

Note 2: Disclosed invention uses computer system.

Note 3: Claimed invention recites specific hardware components of memory management unit and interface unit. *See* Guidelines, Section IV.B.2(a)(ii).
THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

Disclosure

The specification discloses a general purpose digital computer programmed to convert signals from binary coded decimal (BCD) form into pure binary form. The general purpose digital computer executes a series of mathematical algorithm process steps to perform the conversion. All hardware components shown in the disclosure and drawings would be present in any general purpose digital computer. That hardware includes a keyboard to enter data, a memory section for storing an application program for directing the conversion of the signals, at least several arrays of logic circuits that are reconfigured by the program code segments of the application program, clocking and timing circuits to control the execution of the conversion steps set forth in the program code listing, at least one reenterant shift register, and a display for displaying the output of the conversion.

The computer memory is encoded with a specific application program that directs the signal conversion. A specific program listing which shows the program code is provided as an appendix to the written description. This is the only disclosed embodiment of the invention. The written description includes a high level description of the program and flowcharts that show the specific steps performed by the program. This disclosure is clearly stated to be for explanatory purposes only and to aid in understanding the operation of the specific software embodiment. There is correspondence between the program, established clearly in the flowcharts, and the means plus function limitations set forth in the claim. All aspects of the disclosure property comply with the requirements of 35 USC § 112, first paragraph.

Claim

A digital computer for converting signals from binary coded decimal form to binary form, said computer comprising:

a. a keyboard for inputting data;

b. a reentrant shift register;

c. means for storing binary coded decimal data in the shift register;

d. means for shifting the signals to the right by at least three places until there is a binary "1" in the second position of said shift register;

e. means for masking out the binary "1" in said second position of said shift register;

f. means for adding a binary "1" to the first position of said shift register;

g. means for shifting the signals to the left by two positions;

h. means for adding a "1" to said first position;

i. means for shifting the signals to the right by at least three positions in preparation for a succeeding binary "1" in the second position of said shift register; and

j. a display screen for displaying the resulting binary number.

Table for Claim

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program*per se*?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure*per se*?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	NO	GoTo: Q.9	
BOX 9	Q.9. Is claimed invention a product for performing a process?	YES	GoTo: Q.10	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?	YES	GoTo: END	Note 3
BOX 12	Q.12a. Does process have post-computer process activity?		GoTo:	
	Q.12b. Does process have pre-computer process activity?		GoTo:	
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?		GoTo:	
	Q.13b. Does process solve math problem w/o limitation to a practical application?		GoTo:	

Table Notes for Claim

Note 1: Disclosed invention is an improved interface between a keyboard and a computer for enhancing data entry functionality in a practically useful manner.

Note 2: Disclosed invention uses general purpose computer system.

Note 3: Claimed invention recites specific software. The means plus function limitations correspond to specific program code segments for performing the function. *See* Guidelines, Section IV.B.2(a)(ii). THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

Disclosure

The specification teaches a computer system that determines the value of an investment portfolio after a set time. The system uses a computer-based calculation using purchase information and rates of return on investments. The computer-based system is stated to be a "special use" computer having a dedicated architecture and being programmable for calculating initial and updated values and return rates for different types of investments. However, no specific circuits or logic structures are disclosed by the applicant. A keyboard is provided to permit a user to input data for the purchase information and minimum desired rates of return on the investments. The input data is stored in the computer memory sections. The computer system is connected to various on-line sources of current investment rate information which is loaded into designated memory locations for use in updating current investment values and rates of return for the portfolio. The system calculates an overall average rate of return for the investments in the portfolio. The computer is connected to an audio tape system combined with an automated phone dialing system to warn the user when the overall average rate of return drops below a set minimum. When the overall average rate of investment drops below the minimum desired rate of return set by the investor, the audio tape system and dialing system is activated to contact the investor and provide information with respect to various investment options. Although the specification does not disclose a specific program *per se*, it includes a high level description and associated flowcharts that would clearly permit one of ordinary skill in the programming art to produce the required program without undue experimentation. Further, each means plus function limitation in the data input, storage, and calculation limitations of the claim (but not the means for contacting which is the audio tape/dialing system) corresponds to a specific program sequence represented in the flowchart. There is a complete written description and enabling disclosure of the invention.

Claim

A data processing system for determining the return on a plurality of investments in an investment portfolio comprising:

a. means for inputting the initial date, the initial value and type of each of a number of investments made by an investor;

b. means for inputting the telephone number of the investor and a minimum overall average rate of return that the investor would like to receive;

c. means for storing the initial date, the type, and the initial value of each investment made by the investor;

d. means for receiving and storing data corresponding to the daily rate of return for each type of investment;

e. means for processing said stored data reflecting the type, the initial date and the initial value of each investment, said processing means manipulating the stored values with the daily rate of return for each type of investment and computing a sum of the values of the investments and corresponding rates of return for the individual investments and determining a weighted average of the investments and their relative rate of return to determine an overall average return for the portfolio; and

f. means for contacting the investor if the overall average rate of return drops below said minimum rate of return.

Table for Claim

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program*per se*?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure*per se*?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	NO	GoTo: Q.9	
BOX 9	Q.9. Is claimed invention a product for performing a process?	YES	GoTo: Q.10	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?	YES	GoTo: END	Note 3
BOX 12	Q.12a. Does process have post-computer process activity?		GoTo:	
	Q.12b. Does process have pre-computer process activity?		GoTo:	
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?		GoTo:	
	Q.13b. Does process solve math problem w/o limitation to a practical application?		GoTo:	

Table Notes for Claim

Note 1: Disclosed invention determines value of investment after pre-determined time period.

Note 2: Disclosed invention uses computer system.

Note 3: Although the disclosure uses the label "special use" computer, absent disclosure to support that this is a specific machine, this is not sufficient to justify that conclusion. Specific circuitry and/or logic gates should be disclosed unless the structure is well known to those skilled in the art. Where the claimed invention recites a true "special use" computer system, this is a specific machine. *See* Guidelines, Section IV.B.2(a)(ii).

The claimed invention is a computer system combined with means for contacting the investor. The means for contacting investor is a specific audio tape system and automated phone dialing system. This is a specific machine; the means for contacting being more than the computer.

Note, even though the computer program (functional descriptive material - means for data input, storage, and calculation) is not specific software, when combined with a specific machine the claimed invention, as a whole, is still a specific machine. The mere fact that a component of a system is a data processing element or computer program does not change a statutory claim into a non-statutory claim.

ThEXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS
EXAMPLE: PROCESS OUTSIDE THE COMPUTER PERFORMS INDEPENDENT PHYSICAL ACTS

Disclosure

The specification discloses a process for controlling a rear wheel steering angle in a four-wheel steering vehicle. The disclosed control process includes the detection of several parameters representing the operating condition of the vehicle including a front wheel steering angle (δ_f) and the speed of the vehicle (V). The disclosed process further includes utilizing a particular transfer function G(s) and calculating a desired rear wheel steering angle according to

$$\delta_r = \{G(s) * K * \delta_f\}/V$$

where K is a steering coefficient.

Both the transfer function and the steering coefficient are properly defined in the written description. Each parameter is sensed by a detector which generates an electrical signal representative of the magnitude of the sensed parameter. The electrical signals are processed in a microprocessor specifically programmed to calculate the desired steering angle. All of the detectors, the programmed microprocessor for calculating the desired steering angle, and the steering mechanisms are properly described and enabled in the written description of the invention.

EXAMPLE: PROCESS OUTSIDE THE COMPUTER PERFORMS INDEPENDENT PHYSICAL ACTS

Claim

A method for controlling the rear wheels of a four-wheel steering vehicle, comprising the steps of:

a. detecting a front wheel steering angle (δ_f) of said vehicle;

b. detecting a speed of said vehicle (V);

c. calculating a desired rear wheel steering angle (δ_r) based on said front wheel steering angle (δ_f) and said vehicle speed according to $\delta_r = \{G(s) * K * \delta_f\}/V$, where G(s) is a transfer function, and K is a steering coefficient; and

d. steering the rear wheels to said desired rear wheel steering angle (δ_r).

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS
EXAMPLE: PROCESS OUTSIDE THE COMPUTER PERFORMS INDEPENDENT PHYSICAL ACTS

Table for Claim

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program*per se*?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure*per se*?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	YES	GoTo: Q.12a	
BOX 9	Q.9. Is claimed invention a product for performing a process?		GoTo:	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?		GoTo:	
BOX 12	Q.12a. Does process have post-computer process activity?	YES	GoTo: END	Note 3
	Q.12b. Does process have pre-computer process activity?		GoTo:	
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?		GoTo:	
	Q.13b. Does process solve math problem w/o limitation to a practical application?		GoTo:	

EXAMPLE: PROCESS OUTSIDE THE COMPUTER PERFORMS INDEPENDENT PHYSICAL ACTS

Table Notes for Claim

Note 1: Disclosed invention controls rear-wheel steering angle in four-wheel drive vehicles.

Note 2: Disclosed invention uses computer system.

Note 3: The transformation occurs with the steering of the rear-wheels to the desired steering angle. *See* Guidelines, Section IV.B.2(b)(i).
THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

Example: PROCESS OUTSIDE THE COMPUTER MANIPULATES DATA REPRESENTING PHYSICAL OBJECTS/ACTIVITIES

Disclosure

The invention is directed to the analysis of electrocardiograph signals from a heart patient in order to determine certain characteristics of the heart function. Heart activity is monitored by means of an electrocardiograph device, whereby electrodes attached to the patient's body detect the heart's electrical signals in accordance to the various phases of heart activity. The specification discloses selecting certain of the electrocardiograph signals (QRS segment) so as to convert them from analog to digital values, and a composite digital representation of the QRS segment is obtained by selecting and averaging a large number of the patient's QRS waveforms. The analog-to-digital converter for converting the electrocardiograph signals to digital values and the high pass filter are well known components to those of ordinary skill in the art. The anterior portion of the composite QRS waveform is isolated and then processed in reverse time so as to ascertain whether or not the patient is in high risk of having heart failure. A programmed microprocessor controls the processing of the signals. The specific program, accompanied by a high level description and flowcharts of the program steps, is properly disclosed.

Example: PROCESS OUTSIDE THE COMPUTER MANIPULATES DATA REPRESENTING PHYSICAL OBJECTS/ACTIVITIES

Claim

A method for analyzing electrocardiograph signals to determine the presence or absence of a predetermined level of high frequency energy in the late QRS signal, comprising the steps of:

a. converting a series of QRS signals to time segments, each segment having a digital value equivalent to the analog value of said signals at said time;

b. applying a portion of said time segments in reverse time order to a high pass filter; determining an arithmetic value of the amplitude of the output of said filter; and

c. comparing said arithmetic value with said predetermined level.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS
Example: PROCESS OUTSIDE THE COMPUTER MANIPULATES DATA REPRESENTING PHYSICAL OBJECTS/ACTIVITIES

Table for Claim

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program*per se*?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure*per se*?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	YES	GoTo: Q.12a	
BOX 9	Q.9. Is claimed invention a product for performing a process?		GoTo:	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?		GoTo:	
BOX 12	Q.12a. Does process have post-computer process activity?	NO	GoTo: Q.12b	
	Q.12b. Does process have pre-computer process activity?	YES	GoTo: END	Note 3
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?		GoTo:	
	Q.13b. Does process solve math problem w/o limitation to a practical application?		GoTo:	

Example: PROCESS OUTSIDE THE COMPUTER MANIPULATES DATA REPRESENTING PHYSICAL OBJECTS/ACTIVITIES

Table Notes for Claim

Note 1: Disclosed invention determines whether or not patient has high risk of suffering from heart failure.

Note 2: Disclosed invention uses a microprocessor.

Note 3: The transformation occurs when the QRS signal is converted to a digital electrical signal. *See* Guidelines, Section IV.B.2(b)(i).
THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

Example: COMPUTER-IMPLEMENTED PROCESS NOT OUTSIDE THE COMPUTER LIMITED TO A PRACTICAL APPLICATION

Disclosure

The invention describes the basic process for dynamically changing the definition of a system's I/O configuration, as that definition is known to the I/O subsystem (the hardware), and the operating system (the software).

In operation, a program creates a file defining the "current" state of the system I/O configuration related control blocks in dynamically modifiable storage. The program then creates a "future" I/O configuration file (which may, in fact, be a previous configuration). When it is desired to change the system definition to the "future" configuration, a comparison function compares the two configuration definitions and creates a configuration change block representing the changes necessary to make an efficient transformation to the hardware and/or software definition control blocks as necessary, and a completion signal is generated for dependent processes.

The invention provides a mechanism for dynamically changing either or both the hardware and software I/O configuration of a data processing system with guaranteed data integrity. This invention provides for the creation of a single I/O configuration definition usable for creating both a hardware definition and a software definition. The invention also provides an efficient mechanism for migrating a system from a first I/O configuration to a second I/O configuration and provides for validation that a transition from a first configuration definition to a second configuration definition is permissible.

An installation creates a source I/O definition file, defining a current system I/O configuration, and a target I/O definition file, defining a future I/O configuration. An activate function is initiated to change the system's hardware and software definition to correspond to the target I/O definition file. A compare function compares the source and target I/O definition files, and creates a Configuration Change Block to efficiently drive the change process. A validation function validates that the proposed change is valid, and the change process updates the hardware and software configuration definitions. If the change process is successful, a notification is sent; if not, a back-out process restores the I/O configuration to its initial state.

The specification discloses 10 sheets of detailed flowcharts concerning the method of manipulation of the configuration. The specification discloses a block diagram of the hardware modules which are necessary in the best mode of operation of the system.

Example: COMPUTER-IMPLEMENTED PROCESS NOT OUTSIDE THE COMPUTER LIMITED TO A PRACTICAL APPLICATION

Claim

A method of reconfiguring a computer system having a central processor, input/output units in an input/output subsystem attached to the central processor, and an operating system, a system for dynamic reconfiguration of one or more of said input/output units, comprising the steps of:

a. using a definitional means for creating, on a configuration definitional file, one or more configuration instances, each configuration instance representing an associated configuration of said one or more of said input/output units;

b. creating by said definitional means, a current configuration instance, which represents a first associated configuration;

c. creating by said definitional means, a future configuration instance, which represents a second associated configuration;

d. initializing the system for said current configuration instance, one or more dynamically changeable software control blocks describing the first associated configuration to the operating system;

e. initializing the hardware from said current configuration instance, one or more dynamically changeable hardware control blocks describing the first associated configuration to the input/output subsystem;

f. creating from said current configuration instance and said future configuration instance, a configuration change block describing changes to be made to said software control blocks and said hardware control blocks when changing from said first associated configuration to said second associated configuration; and

g. creating from said configuration change block, changes to said hardware control blocks and said software control blocks so that, if said creating changes is successful, said software control blocks describe the second associated configuration to the operating system, and said hardware control blocks describe the second associated configuration to the input/output subsystem and if said creating changes is not successful, a change creation error indication is set.

Example: COMPUTER-IMPLEMENTED PROCESS NOT OUTSIDE THE COMPUTER LIMITED TO A PRACTICAL APPLICATION

Table for Claim

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program*per se*?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure*per se*?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	YES	GoTo: Q.12a	
BOX 9	Q.9. Is claimed invention a product for performing a process?		GoTo:	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?		GoTo:	
BOX 12	Q.12a. Does process have post-computer process activity?	NO	GoTo: Q.12b	
	Q.12b. Does process have pre-computer process activity?	NO	GoTo: Q.13a	
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?	NO	GoTo: Q.13b	
	Q.13b. Does process solve math problem w/o limitation to a practical application?	NO	GoTo: END	Note 3

Example: COMPUTER-IMPLEMENTED PROCESS NOT OUTSIDE THE COMPUTER LIMITED TO A PRACTICAL APPLICATION

Table Notes for Claim

Note 1: Disclosed invention dynamically changes a computer system's input/output configuration with guaranteed data integrity.

Note 2: Disclosed invention uses computer system.

Note 3: Claimed invention is limited to practical application of dynamically changing a computer system's input/output configuration.
THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

Example: PROCESS MANIPULATES ABSTRACT IDEA OR SOLVES PURELY MATHEMATICAL PROBLEM WITHOUT LIMITATION TO A PRACTICAL APPLICATION

Disclosure

The specification discloses a general purpose digital computer programmed to convert signals from binary coded decimal (BCD) form into pure binary form to provide an improved interface between the keyboard and the computer for enhancing data entry. The general purpose digital computer executes a series of mathematical algorithm process steps to perform the conversion. All hardware components shown in the disclosure and drawings would be present in any general purpose digital computer.

No specific program is disclosed but the disclosure includes a high level description and associated flowcharts from which one of ordinary skill in the art could practice the invention without undue experimentation. All aspects of the disclosure properly comply with the requirements of 35 USC § 112, first paragraph.

Example: PROCESS MANIPULATES ABSTRACT IDEA OR SOLVES PURELY MATHEMATICAL PROBLEM WITHOUT LIMITATION TO A PRACTICAL APPLICATION

Claim

The method of converting signals from binary coded decimal into binary comprising the steps of:

a. storing the binary coded decimal signals in a reentrant shift register;

b. shifting the signals to the right by at least three places, until there is a binary "1" in the second position of said register;

c. masking out said binary "1" in said second position of said register;

d. adding a binary "1" to the first position of said register;

e. shifting the signals to the left by two positions;

f. adding a "1" to said first position; and

g. shifting the signals to the right by at least three positions in preparation for a succeeding binary "1" in the second position of said register.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: PROCESS MANIPULATES ABSTRACT IDEA OR SOLVES PURELY MATHEMATICAL PROBLEM WITHOUT LIMITATION TO A PRACTICAL APPLICATION

Table for Claim

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program*per se*?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure*per se*?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	YES	GoTo: Q.12a	
BOX 9	Q.9. Is claimed invention a product for performing a process?		GoTo:	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?		GoTo:	
BOX 12	Q.12a. Does process have post-computer process activity?	NO	GoTo: Q.12b	
	Q.12b. Does process have pre-computer process activity?	NO	GoTo: Q.13a	Note 3
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?	NO	GoTo: Q.13b	
	Q.13b. Does process solve math problem w/o limitation to a practical application?	YES	GoTo: END	Note 4

Example: PROCESS MANIPULATES ABSTRACT IDEA OR SOLVES PURELY MATHEMATICAL PROBLEM WITHOUT LIMITATION TO A PRACTICAL APPLICATION

Table Notes for Claim

Note 1: Disclosed invention is an improved interface between a keyboard and a computer for enhancing data entry functionality in a practically useful manner.

Note 2: Disclosed invention uses general purpose computer system.

Note 3: Step a. is a mere data-gathering step for the mathematical operation of steps b. through g. It does not measure physical objects or activities.*See* Guidelines, Section IV.B.2(d)(ii).

Note 4: Claimed invention is not limited to a practical application. Steps b. through g. are a sequence of mathematical operations for converting BCD into binary. As noted above, step a. is a mere data-gathering step. Viewed as a whole, the claimed invention merely converts one set of numbers into another set of numbers. *See* Guidelines, Section IV.B.2(c) and (d). The claim should be rejected under 35 U.S.C. § 101.

NOTE: Because the claimed invention is directed solely to a process for solving a mathematical algorithm, in addition to performing the above analysis the Freeman-Walter-Abele test may also be relied upon to verify that the claim defines non-statutory subject matter.
THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.