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(54)

Numeral filling puzzle video game having function of resolving riddle

(57)

Disclosed is a numeral and letter filling puzzle game machine comprising a machine entity with a screen capable of displaying a major square matrix of 9x9 square spaces containing nine sub-matrices of 3x3 square spaces, a keyboard provided beside the screen for inputting numbers and letters for game, a micro-processing storing the program of game rules and program for assistance of resolving riddles are built in the video game, a screen interface for interconnecting the screen and the micro-processing unit, and a power source for supplying electric power to the microprocessor, the keyboard, and the screen. Characterized is that: a micro-processing unit stored with program of game rules and program for assistance of resolving riddles are built in the video game, said micro-processing unit is electrically connected with keyboard, and screen.

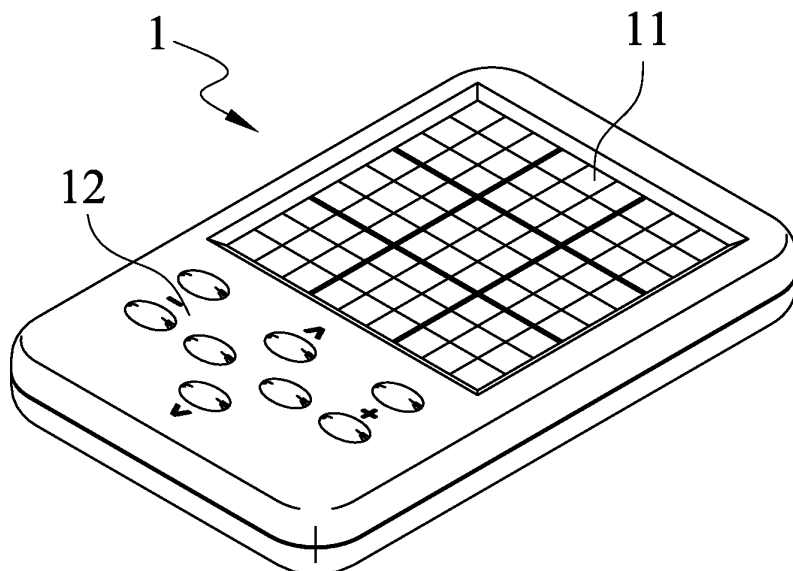


FIG 1

Description

[0001] The present invention relates to a numeral filling puzzle game, wherein all of the numerals can be filled in the blank spaces of the row and column corresponding to a designed blank space are provided to the player, so as to assist the player find the numerals suitable for the blank spaces.

[0002] At present time, there is a numeral filling puzzle video game with the name of Su Do Ku game, it has a 9x9 square matrix blank spaces arranged in nine 3x3 sub-matrices for filling the numerals from 1 to 9 with the rule of forbidding repeated appearance of the same numeral in the same column or the same row.

[0003] It is noticed that although the present numeral filling puzzle video game can continuously amended the filled numerals, and check whether a numeral is filled in twice or not. However, said numeral filling puzzle video game does not have the function of showing all the numerals can be filled into a blank space, it is then can not assist the players to resolve their riddles. And the player feels it is difficult to quickly resolve the riddle of the game, such that the interest of playing the game is greatly reduced.

[0004] Accordingly, it is an object of the present invention to provide a numeral filling puzzle video game which is capable of providing all of the numerals can be filled in the blank spaces of the row and column corresponding to a blank space, so as to assist the players to resolve their riddles.

[0005] To achieve the above object, the present invention provides a video game having a screen to display a major square matrix of 9x9 square spaces containing nine 3x3 square sub-matrices therein, and a keyboard is provided beside the screen for inputting the numeral into the square spaces of the matrix of the video game. A micro-processing unit stored with game rules and program for resolving riddles is built in the video game and is connected with the keyboard and the screen.

[0006] When a numeral filling game is performed, a cursor can be firstly moved to a desired blank space to be filled with a numeral, if the command of providing hint or suggestion numerals is inputted to the microprocessor by pressing the key of keyboard, the microprocessor then can find out all of the numerals can be filled into the blank spaces of the column (or the rows) corresponding to said blank spaces of the row (or the column) corresponding to the said space, and then show the numerals on the columns (or the rows) corresponding to the blank spaces of the row (or the column), so as to assist the player resolve the riddle much quickly than before, and the interest of playing the game is then increase.

[0007] A more complete understanding of these and other features and advantages of the prevent invention will become apparent from a careful consideration of the following detailed description of certain embodiments illustrated in the accompanying drawings.

Fig. 1 is a prospective view of the numeral filling puzzle video game of the present invention.

Fig. 2 is a view showing one embodiment of the screen of present invention in playing.

Fig. 3 is a view showing another embodiment of the screen of the present invention in playing.

Fig. 4 is a view showing a further embodiment of the screen of the present invention in playing..

[0008] Referring to Fig. 1, 2, and 3, the numerals filling puzzle video game according to the present invention has a game entity 1 equipped with a screen 11 (for example: LCD screen) to display a major matrix of 9x9 square spaces which is further divided into 3x3 sub-matrices of 3x3 square spaces, and a keyboard 12 is provided beside the screen 11 for inputting numerals into the squares spaces of the screen of the puzzle video game. A micro-processing unit (MPU) (not shown in the drawings) with stored game rules and program for resolving riddles is built in the game entity 1, and is connected with the keyboard 12 and the screen 11 so as to display the data on the screen 11 either during the game is going on, or after game is over. A power source 15 is provided for supplying electric power to the micro-processing unit (MPU), the keyboard 12, and the screen 11.

[0009] With this structure for playing the game, by using the above construction, when the numeral filling puzzle game is played and if the player wishes to use the function of assistant resolution, he can firstly press the keyboard 12 to move a cursor on the screen 11 to a blank space 21 chosen by him, and press the key of keyboard to input the instruction of providing hinter suggestion numerals, the micro-processing unit (MPU) then shall find out and display all of the numerals suitable to be filled in the blank spaces of the same row 22 (or column 23) corresponding to said chosen blank space 21. Such that the players does not need to find and remember the numerals to be filled into the blank spaces of the same row 22 (or column 23) corresponding to said chosen blank space 21. Then the riddles can be resolved much more quickly than ever, and the interest of playing the game is increased.

[0010] Furthermore, if a general game of numerals filling puzzle game is to be performed, by pressing a key of the keyboard 12, the random number generator of said micro-processing unit then shall fill some numerals in the blank spaces of said sub-matrices to form a riddle; then the player can use another functional key of the keyboard 12 to fill another numeral into a blank space, and the micro-processing unit then checks the filled number automatically, if the filled number is found to be the number not suitable for the blank space, then a mark is displayed on the screen 11, or, the filled number is deleted, so as to remind the player to refill a new number. By automat-

ically checking the filled numbers one by one, all of the correct numbers are filled and the numerals filling puzzle game is finally completely played.

[0011] As shown in Fig. 2 and 3, if the player meets a blank space 21 (or, space in the same row or spaces in the same column) can not be easily resolved, the cursor on the screen 11 can be moved to said blank space 21, said blank space 21 then is a chosen blank space, and, by pressing the function key to input the order of providing hint or suggestion numerals via screen 11, the micro-processing unit then shall find out and display all of the numerals suitable to be filled in the blank spaces of the same row 22 (or column 23) corresponding to said chosen blank space 21 according to the game rules, so as to enable the player to select the numerals suitable for filling the blank spaces and to resolve his riddle, and then the interest of play is increased.

[0012] In the present invention, the game rules of play are that game as the rules for playing the game, the blank spaces in the matrix of 9x9 square spaces have to be completely filled, and the same numeral can not be repeatedly appeared in same row and same column. Furthermore, in the present invention, said matrix having 9x9 square spaces is divided into nine sub-matrices having 3x3 square spaces, the numerals to be filled into the blank square spaces of said sub-matrices still can not be repeatedly appeared. Therefore, according to the said game rules, the micro-processing unit shall find out and display all of the numerals suitable to be filled in the blank spaces of the same row 22 (or column 23) corresponding to said chosen blank space 21, so as to enable the player select the numerals suitable for filling the blank spaces of the row 22 (or column 23) corresponding to the chosen blank space 21 and quickly resolve his riddle.

[0013] Fig. 4 is a view showing a further embodiment of the screen of the present invention in playing. In the subject figure, the player can move the cursor to the space to be filled with numeral (that is, the space indicated by dark block) and then perform the game of filling numerals. However, to a player, it is sometime difficult to determine immediately which numeral is proper to be filled. The most common method is to fill the numerals from 1 to 9 one by one, and check which numeral can meet the game rules. In the example shown in Fig. 4, 1, 2, 3, 6, 7, 9, can be used to fill into the space indicated by dark block. However, the correct numeral can not be determined by one by one filling and checking all of the numerals meet the game rules. Consequently, the inventor then has invented the unique design to provide suggestions to resolve the riddle of player, so as to provide the player very useful information to assist him to resolve his riddles.

[0014] The principles applied in the present invention are: firstly, the micro-processing unit temporarily store the riddle information displayed on the screen 11 at present time into a memory, then clear the picture of screen 11, except the row (or column) chosen by the player (that is, the row or column to be fully filled), then

the micro-processing unit sequentially stimulated fills the numerals 1 to 9 into every blank space 12 or 21 (please refer Fig. 2 or Fig. 3) without designated numerals, and checks the numerals in accordance with the game rules. After that, all of the numerals meet with the game rules are displayed on the row (or column) corresponding to the blank space 12 or 21, as shown in Fig. 2 and 3, wherein, Fig. 2 shows a picture of providing hint numerals for a column having blank spaces to be filled; and Fig. 3 shows a picture of providing hint numerals for a row having blank spaces to be filled. It can be seen from Fig. 2 that, the numerals can be filled in the blank spaces of the column shown on the screen are respectively 4, 6, 8; 6, 8 and 6, 8 then it is obvious that "4" is the numeral suitable to be filled in the first blank space 12. Furthermore, from Fig. 3, it is still obvious to see that "1" is the numeral suitable to be filled in the most left blank space of the row with dark frame.

[0015] According to the above descriptions, the player is easily to catch the most suitable number for a certain blank space; then the "try and error" without any direction shall be prevented, the pleasure of playing the game is increased. In addition, because the micro-processing unit has stored the original information of screen 11 into a memory, the player then can input the instruction at any time to display all of the correct numerals and the numerals can be used for filling the blank spaces of a certain row or column, so as to enable the player continuously finish the riddle.

Claims

1. A numeral filling puzzle video game having function of resolving riddles comprising a screen for displaying a matrix of a 9x9 square spaces having nine sub-matrices of 3x3 square spaces, on one side of the screen is a keyboard for the player to input numerals into said blank square spaces;
Characterized is that: a micro-processing unit stored with program of game rules and program for assistance of resolving riddles are built in the video game, said micro-processing unit is electrically connected with keyboard, and screen;
When a numeral filling game is performed, a cursor can be firstly moved to a desired blank space by operating the key of keyboard, after the command of providing hint or suggestion numerals is inputted, the micro-processing unit then shall find out all of the numerals can be filled into blank spaces of the row (or the column) corresponding to a certain blank space, and then display the numerals on the columns (or the rows) corresponding to the space, so as to enable the player easily select the numerals to be filled in the blank spaces of a row or a column.
2. The numeral filling puzzle video game having function of resolving riddles as claimed in claim 1, where-

in program to be assistant of resolving riddles stored in the micro-processing unit can temporarily store the numerals information displayed on the screen at any time into a memory, then clear the numeral picture of screen except the row (or column) chosen by the player (that is, the row or column to be fully filled), then sequentially stimulatedly fills the numerals 1 to 9 into every blank space without designated numerals, and checks the numerals according to the game rules, after that, all of the numerals meet with the game rules are displayed on the rows (or columns) corresponding to the blank spaces of a certain column (or row) to be filled.

3. The numeral filling puzzle video game having function of resolving test topics as claimed in claim 1, wherein said screen is a screen of liquid crystal display.

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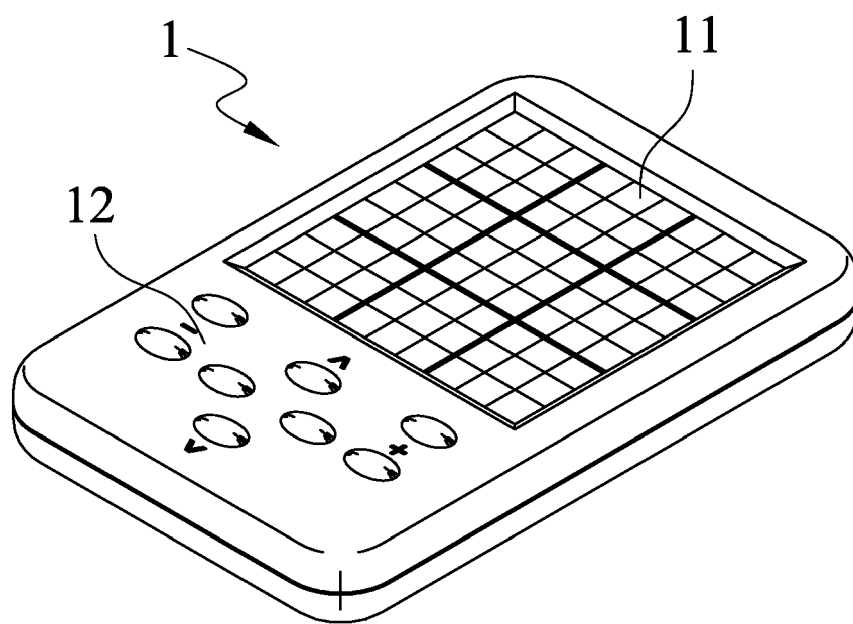


FIG 1

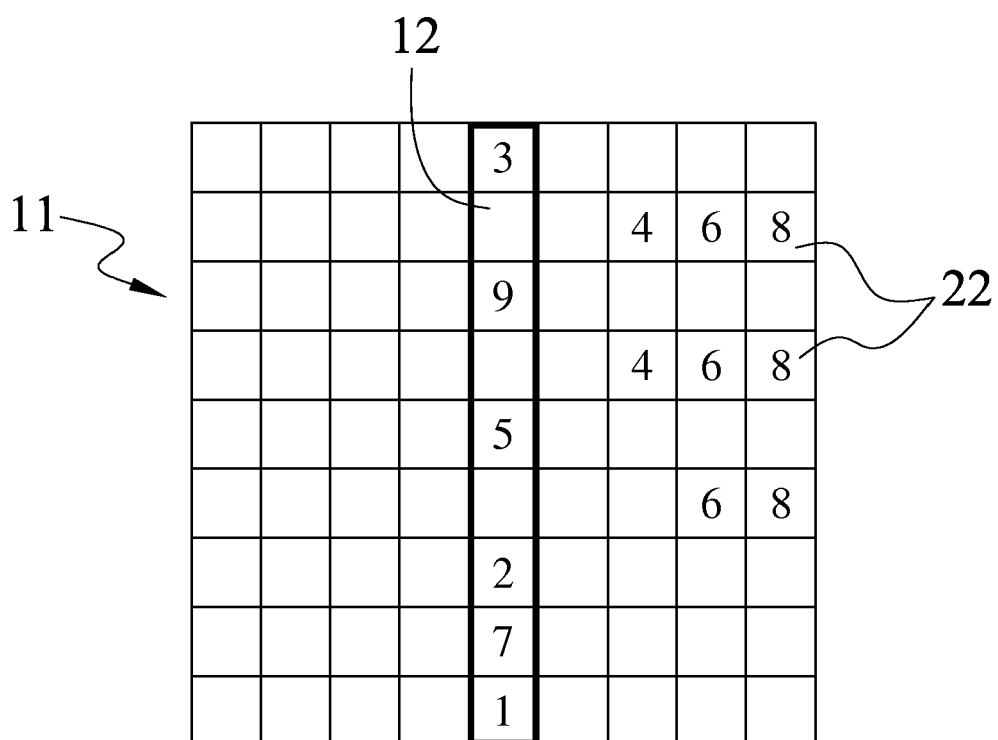


FIG 2

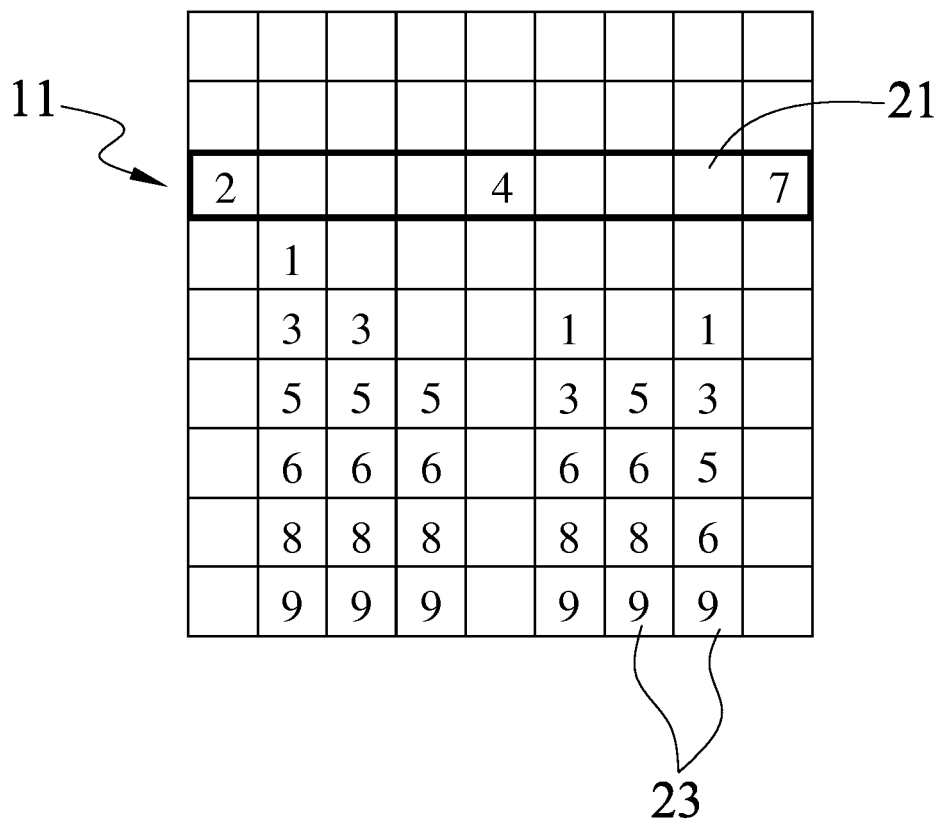


FIG 3

					3			
						6		
2				4	9			
							1	7
	8			■	5			
								4
					2		8	
6					7			
		3			1			

FIG 4



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 06 11 3094

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	GAMES PRESS: "Ubisoft announces Go! Sudoku video game for the PSP system" GAMESINDUSTRY, [Online] 16 February 2006 (2006-02-16), XP002389481 internet Retrieved from the Internet: URL:www.gamesindustry.biz/content_page.php?aid=14758> [retrieved on 2006-07-10] * the whole document * -----	1-3	INV. A63F13/00
			TECHNICAL FIELDS SEARCHED (IPC) A63F
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 10 July 2006	Examiner Arnold, S
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