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(54) **Method of managing a man-machine interface to handle virtual game objects**

(57) A method of managing a man/machine interface to virtually handle virtual game objects, in particular to handle playing cards and chips using at least one multi-touch display.

The method includes the recognition of a particular

combination of gestures by a user, leading to reveal at least one playing card. According to another aspect of the invention, the method may be applied to handling chips and stacks of chips being functional to the bets in a community or multi-player card game.

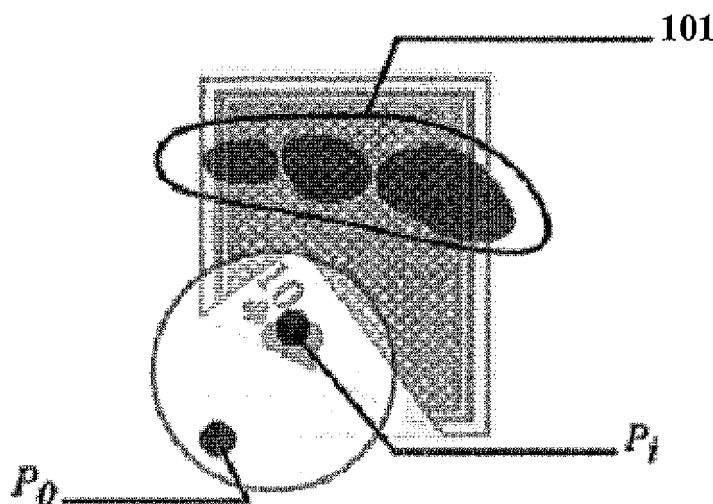


Fig. 3

Description

Field of the invention

[0001] The present invention relates to a method of managing a man/machine interface to virtually handle virtual game objects.

State of the art

[0002] Board games with playing cards are widespread within the domestic and non-domestic environment. Said games simultaneously may involve one or more players. Card games involving several players are widespread in casinos, such as for example, texas hold'em. Although the presence of a dealer is not essential for the structure of the game, it often becomes necessary to control the game flow, maintain the game rhythm, as well as distribute and collect the cards and the gaming chips.

[0003] In addition to automatically managing the game flow, replacing real cards and chips with digital elements permits to obtain significant savings on the management costs of a gambling table.

[0004] The management of these types of games is generally carried out by using computer systems with a series of displays, generally of the touchscreen type, at least one per player, positioned so that viewing by other players and preferably also by people who occasionally pass next to the gambling table is prevented. However, this type of positioning makes the game less emotively attractive, as it suppresses that ritual based on the existence of communicative, non-verbal signals, such as handling the chips and the playing cards, or throwing the cards, which form a large portion of the added value of the game, especially in a casino as compared to an on-line game.

[0005] In fact, a personal monitor provides an individual perspective of the game and does not permit to adequately share the common area, which is an important aspect of the game, indeed it is particularly important to observe the actions of the other players' hands to perceive their state of mind. Whereby, there is a lack of a series of indirect communicative signals characterizing a community game.

[0006] Multi-touch displays are also known, the name of which derives from their feature of being simultaneously responsive in several areas of contact, but they are not effectively employed within this domain.

[0007] In particular, an action having specific importance is that of displaying one's own cards, which at a traditional gambling table often consists in turning up one corner of the cards to check their value and suit, while these are held face down on the table with the other hand.

[0008] Therefore, with respect to the need to allow the players seated at the gambling table to make a community game experience as close to the traditional experience as possible, the technical problem arises of permit-

ting each player to perform actions of handling the cards and chips in sight of the other players, without however thwarting the purpose of the game by making the cards of one player visible to all or some of those present.

Summary of the invention

[0009] It is the object of the present invention to provide a method of managing a man/machine interface to virtually handle virtual game objects, adapted to solve the aforesaid problem.

[0010] The subject of the present invention is a method of managing a man/machine interface to virtually handle virtual playing cards, in particular in systems comprising at least one multi-touch display serving as a gambling table, in accordance with claim 1. It is preferred that said multi-touch display be one for all players, but variations may be provided in which several multi-touch displays form part of the same system.

[0011] The subject of the present invention is also a method of managing a man/machine interface to handle virtual gaming chips in accordance with claim 9.

[0012] Said method is employed in a system adapted to virtually replicate a card-game environment such as poker or texas hold'em, for example, with chips or tokens, by means of an interactive board interface, preferably one for all the players, which replicates a traditional game scenario where all actions of the players are under the eyes of all those present.

[0013] The invention proposed implements a method of controlling and managing a graphic interface for multi-player card games, such as for example texas hold'em, on a gambling table comprising a multi-touch display so as to permit virtual playing cards to be handled by displaying them away from the other players' looks, while keeping the players' hands and their actions in sight.

[0014] As previously mentioned, a multi-touch display is known per se, and is similar to a touchscreen display, from which it differs in that it is adapted to simultaneously detect several areas of interaction with at least one user.

[0015] The management method provides that the card revealing is allowed by the graphic interface, when the graphic interface itself detects that a player, regardless of the actions performed by the other players, employs at least one hand to shield at least one card from the sight of others, and employs at least one fingertip by sliding it on the same card to virtually turn up a corner thereof.

[0016] Said combination of operations, i.e. of employing a first hand to hide the virtual playing cards and turning up a card with the aid of a finger of the second hand, makes employing virtual cards more realistic and closer to employing real cards.

[0017] Indeed, there are players who do not want to see all the cards in a single round, but want to uncover them one at a time and slowly.

[0018] In terms of a hardware system comprising said multi-touch display and at least one processing unit,

known per se, it is highly important to define a method of detecting and managing the actions and combinations thereof performed by at least one player on said display.

[0019] If a player does not perform any action, no card is shown or at least the back side of one card is shown, i.e. completely reversed, i.e. face down.

[0020] When the system detects that a player performs the aforesaid sequence of actions, which will be disclosed in greater detail below, at least one card is at least partially shown.

[0021] Accidentally displaying the cards to the other players or observers is advantageously prevented as the revealing procedure only becomes available when at least one hand shields at least one card, to be then uncovered by its holder.

[0022] According to another aspect of the invention, the system may make a certain number of virtual chips available for each player, e.g. in relation to the game type. The number and value of said chips depend on the evolution of the game according to the winning rules provided by the game itself.

[0023] A system which manages the detection of one player's gestures in relation to at least one playing card may further show several individual chips and chips grouped in stacks.

[0024] The player may separate one stack by dividing it into an arbitrary number of smaller stacks, or combine several stacks to form a single one.

[0025] The activities of grouping and separating and moving stacks and chips are also detected and managed by the system in relation to a combination of touch and sliding by at least one player's finger on the display surface serving as a gambling table.

[0026] In particular, moving at least one part of a stack or one individual chip into a specific zone suitably and visually delimited as the betting zone results in doubling up or cancelling the bet in relation to the rules of the game implemented by the system. The dependent claims describe preferred embodiments of the invention, thus forming an integral part of the present description.

Brief description of the drawings

[0027] Further features and advantages of the invention will become more evident in light of the detailed description of a preferred, but not exclusive, embodiment of a method of managing a man/machine interface to virtually handle virtual game objects, disclosed by way of non-limiting example, with the aid of the accompanying drawings in which:

Fig. 1 depicts the back of two virtual cards corresponding to the interactive area of a multi-touch display which shows them;

Fig. 2 depicts a partially uncovered virtual card, emphasizing a round circle;

Fig. 3 represents the card in the preceding figure, with the contact imprint of a hand placed to shield

the uncovered part of the card;

Fig. 4 shows a hand placed to shield two cards, emphasizing a circle which marks the lower edge of the cards;

Fig. 5 shows the two cards in the preceding figure, partially uncovered due to a finger touching the zone enclosed by the marked circle;

Fig. 6 depicts a virtual gambling table comprising a multi-touch display emphasizing cards and chips;

Fig. 7 represents a stack of chips virtually handled with one hand;

Fig. 8 depicts a flow chart of a managing method to virtually handle one virtual playing card.

[0028] The same reference numbers and letters in the figures identify the same elements or components.

Detailed description of a preferred embodiment of the invention

[0029] The present managing method allows objects such as playing cards and gaming chips to be handled by employing a multi-touch display as a gambling table. In particular, a hardware system comprising said display and a processing unit implementing said method is particularly suitable to implement community card games such as poker, texas hold'em and the like.

Detailed example of handling a playing card

[0030] With reference to figures 1 to 6, the back 11 of a playing card 1 is depicted by means of the display, with a portion of card turned up to show a portion of the face 12 of the card, on which the value and suit of the card itself are made out. The type of playing card employed is only by way of example.

[0031] The system associates at least part of the area corresponding to the back 11 of the card shown as an interactive area of the display, and possibly a certain surrounding area.

[0032] The display detects when a player places the side or edge of his hand (for example, the right one), then the processing unit enables a circle 13 possibly at one edge of the card closest to the player.

[0033] When said circle is enabled, sliding a finger from a point Po, substantially overlapping the edge of the card enclosed in said circle, to an arbitrary point P1 further within the periphery of the card results in a portion of the card being turned upwards proportionally to the distance between Po and P1 ($|Po - P1|$) or not. Therefore, sliding a finger results in incrementally turning the playing card up.

[0034] According to the player's preferences, said turning up may be simultaneously applied to all of the player's cards, or to each card independently from the others. Moreover, by employing two or three fingers, the player may turn up just as many cards when the system is programmed to turn up the cards independently from

one another.

[0035] Said circle 13 remains enabled so long as the system detects that at least the side of said hand is hiding a sufficient portion of said at least one card.

[0036] Whereby, said circle may or may not be marked with a different colouring overlapping the image of the card, regardless of whether it is shown either completely covered or partially uncovered.

[0037] Said circle 13 may be advantageously marked with another colour or with a lighter colour, or with an edging, to indicate to the player that the card is ready to be revealed, i.e. always after at least one hand is placed as a shield.

[0038] When the finger is lifted or the hand placed on its side is lifted, then the entire back of the card is displayed again.

[0039] As turning up the card, including revealing its value and possibly its suit, is always and exclusively enabled when at least one hand is placed as a shield, the card may be revealed according to another preferred embodiment, following first touching an edge of the card, which after a few seconds or a second touch, is covered again.

[0040] Figure 3 shows the imprint 101 corresponding to a part of a hand which enables said circle, while figure 4 shows a left hand placed as a shield enabling circle 13.

[0041] Figure 5 shows the effect of sliding one finger on the right hand in said circle.

[0042] Hence, the system is able to recognize the positioning of a hand on the area of the playing card and when this happens, the system recognizes the attempt to shield the card from the sight of the other players. Therefore, card viewing is enabled, thus permitting the user to turn it up by moving one finger from a corner of the card, for example, towards its centre.

[0043] Regardless of whether or not it is made visible by the system, said circle may take any shape. However, it is preferred that it encloses at least one corner of the periphery defining the playing card. When several covered cards are shown, the system preferably applies said circle to each card, therefore, when a finger touches the display within said circle and slides it towards the opposite corner of the card, if the system is set to turn up all the cards together, they are all turned up proportionally to the sliding length, otherwise only the concerned card being touched turns up. Examples of shapes of said circle may be rectangles, squares, ellipses or other shapes such as to make the operation of turning up the card as natural and realistic as possible. Therefore, the player may place the side of his hand on the display serving as a gambling table, and hide one or more cards with the back of his hand. Therefore, these cards are enabled to reveal themselves, but only when the finger on the other hand touches the display does said card turn up proportionally to the sliding performed.

[0044] Hence, this system recognizes a combination of gestures on the display or virtual gambling table and suitably reacts by allowing the user to view the card

through a mode which is very similar to observing a real playing card.

[0045] A detailed example of a method of managing a man/machine interface to virtually handle at least one playing card is shown hereinafter with the aid of the flow chart shown in figure 8.

[0046] At step 1, at least one covered card is displayed, then it is detected that a player at least partially covers the back of the card, step 2, then it is checked whether the covered area S of the back is greater than a pre-set value A, step 3, if this is not so, there is a wait, step 3, until said covered area S becomes greater than said pre-set value A; when said covered area S becomes greater than said pre-set value A, step 4 is then executed, which comprises the following steps: at step 41, card revealing is enabled; when said covered area is greater than said pre-set value, the revealing of a circle 13 is enabled, step 42, at one edge of the card and as soon as said covered area becomes smaller than said value, the card is covered again; therefore, step 43, it is checked whether at least one finger is placed in said circle 13 and if it is not checked, there is a wait, otherwise the first contact point Po of the finger on the table is stored, step 44, a status variable B is set to true, step 45, then step 46 is executed, comprising the following sub-steps: step 461, it is checked whether the finger is moved to a second point P1 different from the first Po, then if this is not so, there is a wait until P1 is different from Po, then, at least one of said cards is uncovered, step 462, it is uncovered proportionally to the distance $|Po-P1|$, then it is checked whether the finger remains in contact with the display, just as soon as the finger is lifted, step 46 is completed and said status variable B is set to false, and the card is covered again; then checking whether said covered area is greater than said pre-set value $S > A$ continues: if this is so, go back to step 41 where card revealing is enabled, otherwise at step 5, said revealing is disabled and step 3 is resumed to wait until said covered area becomes greater than said pre-set value A.

[0047] The distance between Po and P1 may or may not be calculated in relation to the position of P1, i.e. by detecting that P1 is more or less within the area defined by the back 11 of the card 1 as compared to Po.

[0048] This may be done, for example, by taking the centre of the back 11 as a reference system.

[0049] The partial and incremental card revealing proportional to the instant distance between Po and P1 allows the player to personally define the moment in which to start uncovering the card, while ascertaining to have suitably shielded the cards with the back of his other hand, and to experience the suitable suspense in uncovering the contents of his hand. Indeed, instantly revealing the cards would not permit enjoying the natural emotions that the game may potentially give.

Detailed example of handling gaming chips

Handling chips with a single finger

[0050] The activities of grouping and separating the stacks are also managed by detecting a suitable sequence of gestures on the surface of the gambling table depicted by a multi-touch display.

[0051] When a sole finger is placed on a single chip or on the first chip of a stack and it is dragged elsewhere on the table, then the system detects the event and moves said chip to the point where the finger was dragged; if it is dragged onto a second stack, the chip is added to the second stack.

[0052] If the finger is placed on a medial zone of the stack, then the upper part of the stack up to the chip touched by the finger may be dragged to a free point of the table, or onto another stack as well as for the single chip.

[0053] Finally, however, if the finger is placed at the base of a stack, it may be entirely dragged to a free point of the table or onto another stack.

[0054] Said point to which the chip or stack may be dragged may coincide with a betting zone.

Handling chips using two fingers

[0055] Touching an area enclosing a stack of chips with at least two fingers is detected by the system, which results in enabling a functionality for precisely setting the chips to be removed from the stack of chips.

[0056] In particular, at least one first label is shown close to the stack, indicating the number of chips to be removed, then sliding said two fingers about the stack in one direction results in increasing said number, while in decreasing it in the other direction.

[0057] The setting is applied when the fingers are taken off the table. Subsequently sliding at least two fingers from said area enclosing the stack results in a number of chips equal to said set number being removed from the stack and moved to the point where the fingers are taken off the table. Even when the fingers are not taken off the table after setting the number of chips to be removed and they are radially dragged to a point on the table, the number of chips to be removed is set and the removal of the same number occurs when they are dragged to the point where the fingers are taken off the table.

[0058] Said setting is certainly valid for the original stack and the stacks separated therefrom, but it may also be extended to all stacks of chips related to the same player.

[0059] It is preferred that touching by two fingers also corresponds to displaying a round ring enclosing the stack of chips, and that a clockwise movement results in an increase, while a counter-clockwise movement results in a decrease of the number displayed by said label indicating the number of chips to be removed.

[0060] A second label may possibly be included, indicating the total number of chips in the stack, and/or a third label indicating the difference of the total number of chips less the number indicated in said first label.

[0061] The selection of the number of chips to be removed from a stack advantageously remains fixed without having to select the number of chips each time, but the last setting made remains valid.

[0062] Hence, when one or more chips is dragged to a free area of the table, the stack is moved to that point; if it is dragged onto another stack, the system adds the dragged chips thereto. If one stack or a single chip is dragged to a betting zone, then those chips remain tied up in the luck of the game, whereby they return to the player, e.g. doubled if he/she wins, or they disappear if he/she loses.

[0063] Therefore, to place a bet, simply moving one or more stacks towards the betting zone of the table is enough. The system may prevent this operation when it is not the player's turn or in any event, when it is not time to place a bet.

[0064] Vice versa, the system permits each player to handle and move the stacks of chips within his own personal area at any time.

[0065] Moreover, the system may manage the movement of several stacks, when it detects the use of several fingers by one or both hands, by positioning each finger on a stack according to the procedures shown above.

[0066] Several stacks may be combined in a single group by means of a selection action, which consists in describing, with a finger, an outline enclosing each pile to be selected. Then dragging a single stack results in dragging the whole group. This procedure makes moving different stacks more efficient for placing large bets.

[0067] Each of the stacks of chips is preferably displayed in a 2 1/2 D perspective, of comparable height to the number of chips in the stack itself.

[0068] Such a system implementing this method of handling game objects, separately and simultaneously manages group card games, so as to replicate a realistic sensation and permit just as much participation as in the traditional game.

[0069] Precisely, the freedom for the players to perform said actions has an important emotive impact on the game, moreover the system does not impose a rigid access structure, but permits that these handling activities be simultaneously achieved by several players.

[0070] One single multi-touch display may advantageously be employed to allow two or more players to play.

[0071] The present invention may be advantageously carried out by means of a computer program which comprises coding means to carry out one or more steps of the method, when this program is run on a computer. Therefore, it is intended that the scope of protection is extended to said computer program and further to computer-readable means comprising a recorded message, said computer-readable means comprising program coding means to carry out one or more steps of the method,

when said program is run on a computer.

[0072] Constructional variations to the non-limiting example described are possible, without however departing from the scope of protection of the present invention, comprising all the equivalent embodiments for a person skilled in the art.

[0073] The person skilled in the art is able to achieve the object of the invention from the aforesaid description without introducing further constructional details.

Claims

1. A method of managing a man/machine interface to virtually handle playing cards, in particular in systems comprising at least one multi-touch display serving as a gambling table, wherein the back (11) of at least one card (1), depicted herein, defines a man-machine interactive area, said method comprising a first step of displaying said at least one covered card; a second step of enabling revealing said at least one card when a player covers a portion (101) of said interactive area with at least the side of his hand, thus shielding it with respect to the sight of others; a third step of at least partially revealing said at least one card when at least a second finger touches a first point (Po) of said interactive area.
2. A method according to claim 1, wherein a card is uncovered when said second finger slides between said first point (Po), substantially corresponding to the edge of said card, and a second point (P1) also belonging to said interactive area (11) and further inwards with respect to said first point (Po).
3. A method according to claim 2, wherein the dimension of the visible portion of the face (12) of the card (1) is proportional to the distance between said first point (Po) and said second point (P1).
4. A method according to claim 2, wherein said second step comprises displaying a marking circle (13) at said card edge.
5. A method according to claim 1, wherein enabling revealing the card (1) occurs when said covered portion (S) of the interactive area is greater than a certain pre-set value (A).
6. A method according to claim 5, wherein revealing card (1) is disabled when that covered portion (S) of the interactive area (11) is detected to be less than or equal to said pre-set value (A).
7. A method according to claim 1, wherein the card (1) is or becomes covered again when said second finger is detected to be removed from said interactive area (11).

8. A method according to the preceding claims, comprising the following steps:

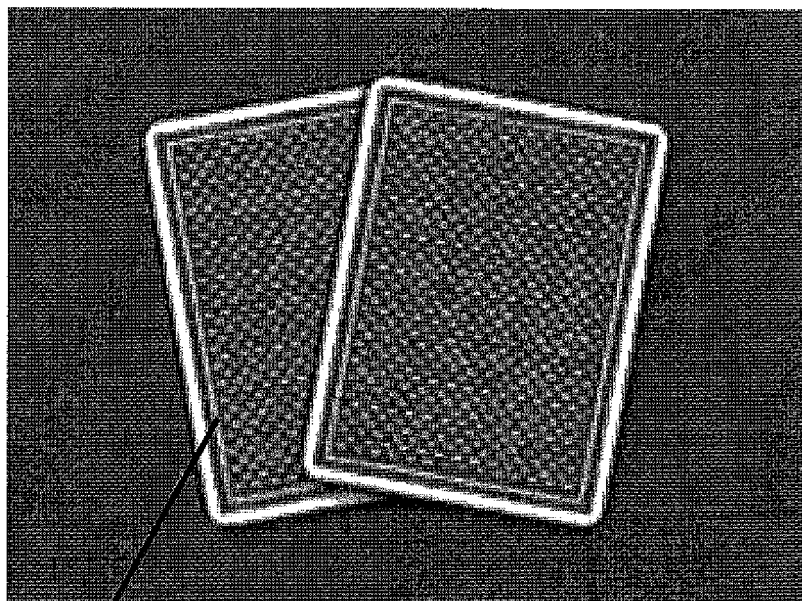
(step 1) displaying at least one covered card, then
 it is detected (step 2) that a player at least partially covers the back of the card,
 then (step 3) it is checked whether the covered area (S) of the back is greater than a pre-set value (A),
 if this is not so, there is a wait (step 3) until said covered area (S) becomes greater than said pre-set value (A);
 when said covered area (S) becomes greater than said pre-set value (A) then (step 41) the card revealing is enabled;
 when said covered area is greater than said pre-set value, revealing the circle (13) at the card edge is enabled (step 42), and as soon as said covered area becomes smaller than said value, the card is covered again;
 therefore (step 43) it is checked whether at least one finger is placed in said circle (13) and there is a wait if this is not so,
 otherwise (step 44) the first point of contact (Po) of the finger on the table is stored, a status variable (B) is set to true (step 45) and then (step 461) it is checked whether the finger is moved to a second point (P1) different from the first point (Po),
 then if this is not so, there is a wait until said second point (P1) is the same as said first point (Po),
 then, (step 462) said at least one card is uncovered, it is uncovered proportionally to the distance between said first and second points, then it is checked whether the finger remains in contact with the table,
 as soon as the finger is lifted (step 46 is completed), said status variable (B) is set to false, and the card is covered again;
 then said covered area being greater than said pre-set value ($S > A$) is continuously checked: if this is so, go back to the step (step 41) where the card revealing is enabled,
 otherwise (step 5) said revealing is disabled and there is a wait again (step 3) until said covered area becomes greater than said pre-set value (A).

9. A method of managing a man/machine interface to virtually handle gaming chips, in particular in systems comprising at least one multi-touch display serving as a gambling table, wherein at least one stack comprising at least one chip (2), depicted herein, defines a man-machine interactive area, said method comprising a step of detecting the position of one finger in contact with the table, then when the

finger is at a first chip (2), when said finger is dragged on the table, said chip is moved to a point in which the finger is removed from the table; instead, when the finger is in a medial zone of a first stack (21) of chips, then when said finger is dragged on the table, the portion of said first stack between said medial zone and the chip on top of the stack is moved to a point in which the finger is removed from the table; instead, when the fingers is at the base of a first stack (21), the whole stack is moved to a point in which the finger is removed from the table.

control said multi-touch display in a man-machine interaction in accordance with the method according to claims 1 to 14.

10. A method according to claim 9, wherein when said finger is removed at a second stack, then said at least one portion of the first stack is stacked on said second stack.
11. A method according to claim 9 or 10, further comprising a preliminary step of setting starting when at least two fingers are detected to be in contact with said interactive area, then a label is shown depicting a numeric value, then when said fingers are slid in a first rotary direction around said first stack of chips, said numeric value is increased, otherwise it is decreased; said numeric value being equivalent to a number of chips which are removed from said first stack when said fingers are dragged on the table to be moved to a point in which said fingers are removed from the table.
12. A method according to claim 11, wherein a second label is shown depicting the number of chips forming the stack (21) and/or a third label depicting the difference between the number of chips forming the stack and the number indicated in said first label.
13. A method according to claim 9, wherein if the point in which the finger is removed from the table is at a betting area, said at least one portion of the stack of chips defines the value of a bet.
14. A method of managing the poker game, in particular in systems comprising at least one multi-touch display as a gambling table according to any one of the preceding claims.
15. A computer program comprising program coding means adapted to carry out the steps of claims 1 to 14, when said program is run on a computer.
16. Computer-readable means comprising a recorded program; said computer-readable means comprising program coding means adapted to carry out the steps of claims 1 to 14, when said program is run on a computer.
17. A gaming system comprising a multi-touch display as a gambling table and a processing unit set up to



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Fig. 1

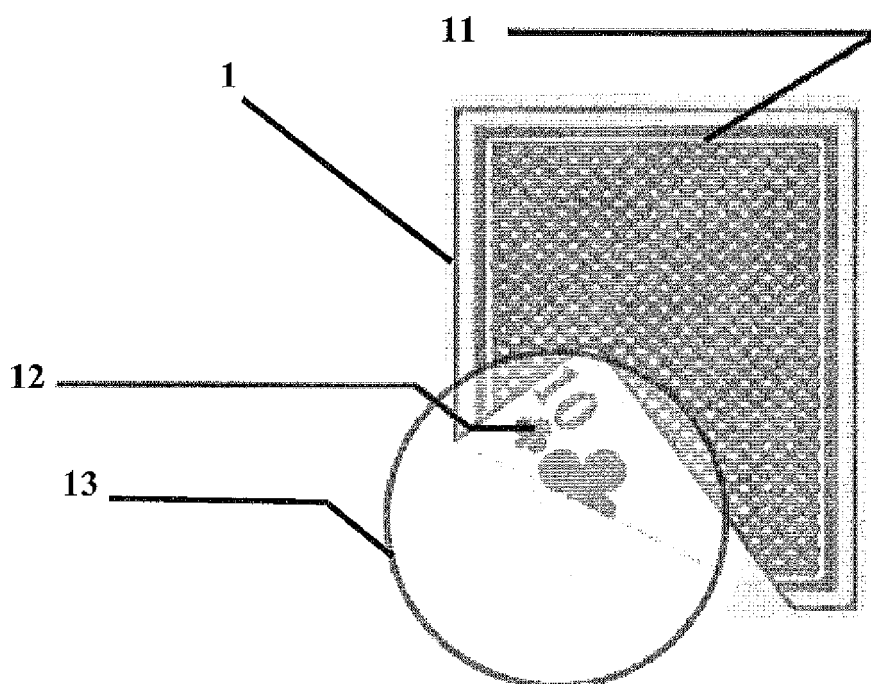


Fig. 2

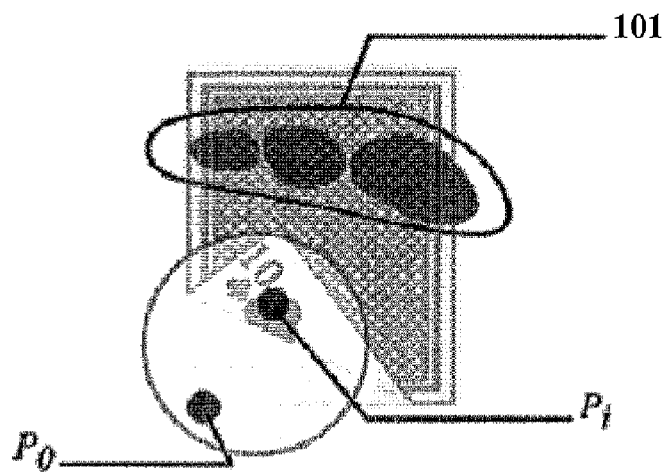


Fig. 3

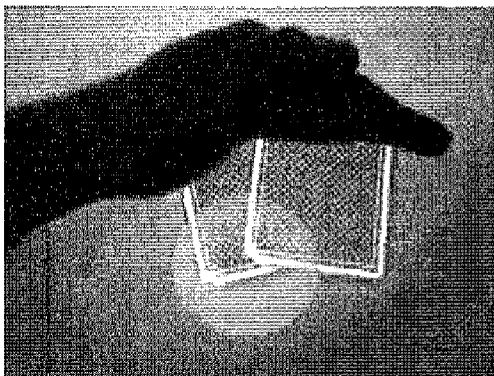


Fig. 4

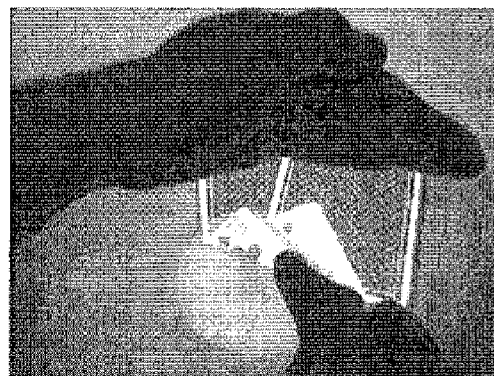


Fig. 5

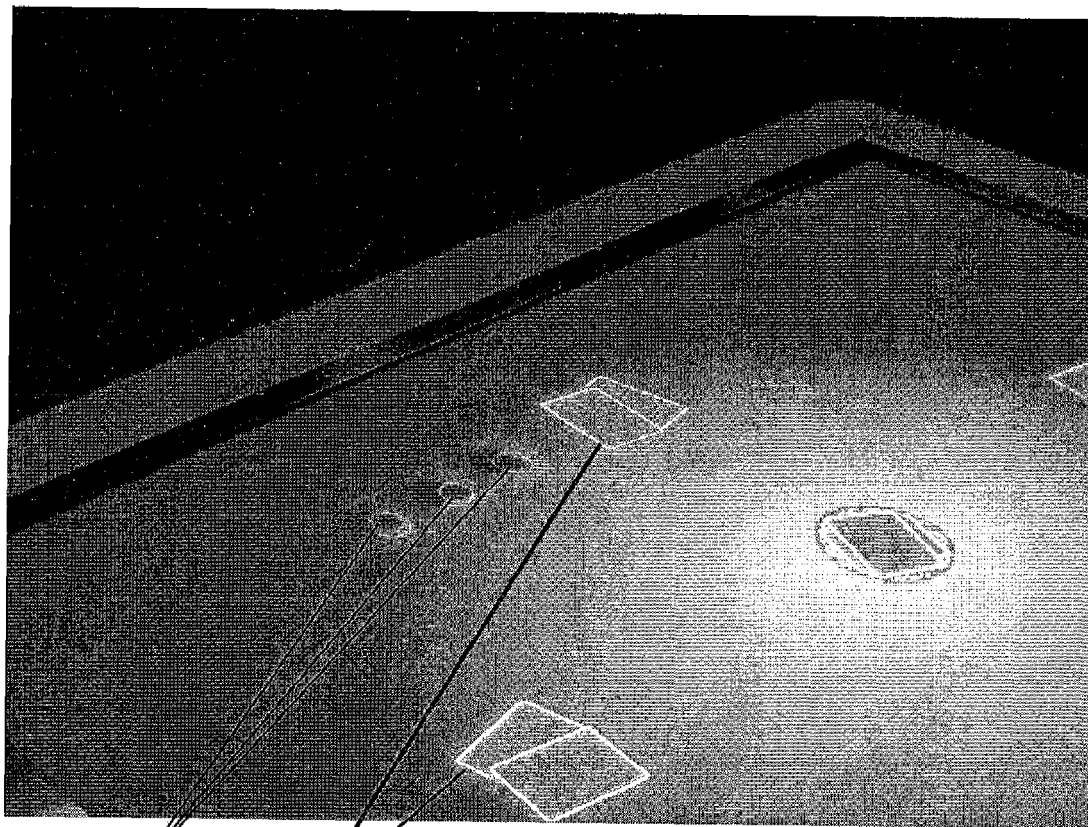


Fig. 6

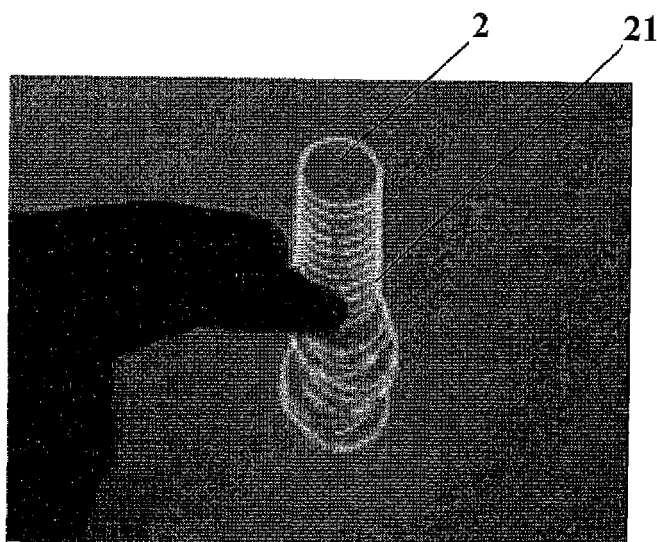


Fig. 7

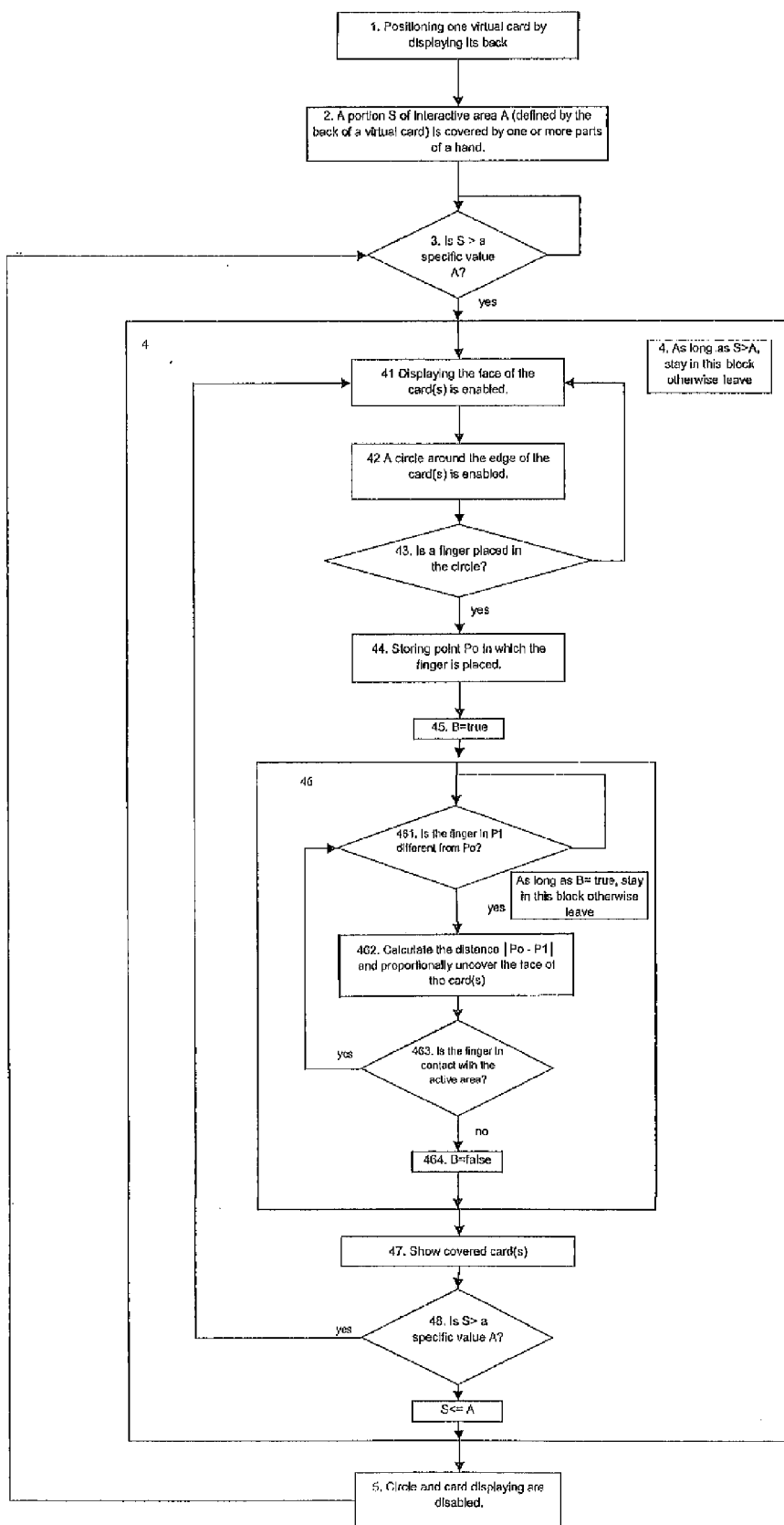


Fig.8



EUROPEAN SEARCH REPORT

Application Number
EP 10 15 3486

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	US 2006/058091 A1 (CRAWFORD JAMES T III [US]; WHITE GEHRIG H [US]) 16 March 2006 (2006-03-16) * figures 9, 10 * * paragraph [0074] - paragraph [0076] * * paragraph [0100] *	1-8, 14-17	INV. A63F13/06 G07F17/32 G06F3/048
X	WO 2008/045464 A2 (WMS GAMING INC [US]; BURAK GILBERT J Q [US]; AREZINA VLADIMIR I [US];) 17 April 2008 (2008-04-17) * paragraph [0073] * * paragraph [0129] * * figure 14a * * abstract *	1-17	
A	US 2008/180404 A1 (HAN JEFFERSON Y [US]; DAVIDSON PHILIP L [US]) 31 July 2008 (2008-07-31) * abstract * * figures 1-6 *	1-17	
			TECHNICAL FIELDS SEARCHED (IPC)
			A63F G07F G06F
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 12 May 2010	Examiner Mikulastik, Patrick
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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EPO FORM 1503 03.82 (P04C01)



Application Number

EP 10 15 3486

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☒ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



LACK OF UNITY OF INVENTION
SHEET B

Application Number
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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-8, 14-17

Secretly revealing a graphical item

2. claims: 9-13

Selecting different quantities for drag and drop

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 10 15 3486

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

12-05-2010

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