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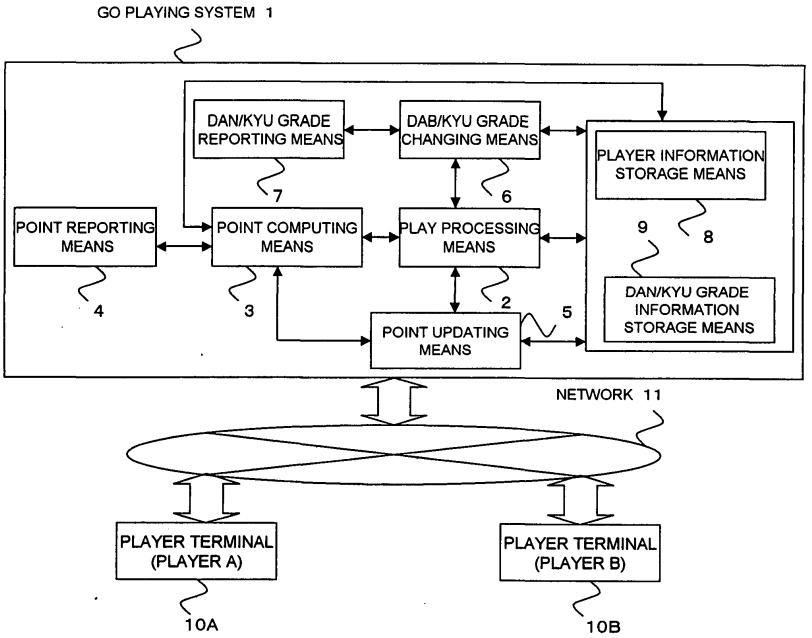
(54) GO PLAYING SYSTEM

(57) A go playing system enabling the players to play go over a network. The system comprises player information storage means, dan/kyu grade information storage means, play processing means, point computing means for computins an increase/decrease of the points of each player according to the win or loss of the play with a basic point, point reporting means for reporting an increase or decrease of the points due to the win or loss to each player terminal, point updating means for storeing the new points corresponding to the win/loss in the player information storage means, dan/kyu grade changing meansa for changing the dan/kyu grade of the winner and the loser by comparing their points with the dan/kyu promotion point and dan/kyu demotion point, and dan/kyu grade reporting means for reporting the change of the dan/kyu grade to the player terminal used bgy the plyer if the dan/kyu grade of the player is changed by the dan/kyu grade changing means.

FIG. 1



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Description

TECHNICAL FIELD

[0001] The present invention relates to a go playing system whereby players can play go via a network.

BACKGROUND ART

[0002] Along with the proliferation of the Internet, there has been the attempt in recent years at realizing a go playing system whereby players can play via a network rather than playing against each other directly. Patent documents 1 to 5 are examples of this type of go playing system.

[0003] When go is played, the rank of playing opponents (referred to as *dan*/*kyu* rank) as a measure thereof is extremely important. The reason is that normally when competitors of the same or approximately the same *dan*/*kyu* rank are to play, their skills will be evenly matched, allowing for more enjoyment.

[0004] In the past, as described in the patent documents indicated below, points have been stored by a prescribed method (e.g., the ELO system) in accordance with the results of game wins and losses, and the *dan*/*kyu* rank of a player has been raised (promotion) or lowered (demotion) based on these results. For example, if the number of points required for promotion to 2 *dan* is 24,700, then when a player's points increase from 24,500 to 25,000 as a result of a game, the player is promoted from 1 *dan* to 2 *dan* because 24,700 points has been surpassed. Conversely, when a player's points decrease from 25,000 to 24,500, the player is demoted from 2 *dan* to 1 *dan* because the number of points has fallen below 24,700.

[0005] Specifically, the *dan*/*kyu* rank is raised when the points increase above a prescribed value, and the *dan*/*kyu* rank is lowered when the points fall below a prescribed value, in accordance with points calculated based on the results of new games. Thus, the point that serves as the basis for the increase in *dan*/*kyu* rank or decrease in *dan*/*kyu* rank is the same. For example, when the points that serve as a basis for increase in *dan*/*kyu* rank or decrease in *dan*/*kyu* rank are set at 24,7000, the promotion from the 1 *dan* to 2 *dan* occurs when the points of a player increase above 24,700, whereas the demotion from 2 *dan* to 1 *dan* occurs when the points of a player fall below 24,700.

Patent document 1: Japanese Laid-open Patent Application No. 2004-298234
Patent document 2: Japanese Laid-open Patent Application No. 2004-329949
Patent document 3: Japanese Laid-open Patent Application No. 2001-321570
Patent document 4: Japanese Laid-open Patent Application No. 2002-78843
Patent document 5: Japanese Laid-open Patent Application No. 2002-78977

[Disclosure of the Invention]

[Problems to Be Solved by the Invention]

[0006] However, in terms of the basis for the increase in *dan*/*kyu* rank or decrease in *dan*/*kyu* rank, a player who has just undergone an increase in *dan*/*kyu* rank is not very likely to win when playing a competitor who has maintained the same ranking level for a long period of time and in many cases will lose and immediately decrease in rank. Specifically, as shown in FIG. 16, the point will frequently rise above and fall below the *dan*/*kyu* promotion or demotion point. This type of occurrence undermines the willingness of a playing system used to employ the playing system, and usability is compromised.

[0007] In addition, in contrast to Japanese or Western chess, when players of different *dan*/*kyu* ranks play go, the game is played by providing a handicap referred to as an *okigo* whereby the person having a lower *dan*/*kyu* rank will place a number of pieces on the board in advance in accordance with the difference in *dan*/*kyu* ranking (normally, one piece (one go stone) for one level of difference).
Accordingly, the *dan*/*kyu* ranking in go is an extremely important element in calculating the handicap during play of actual games in addition to being an element for expressing the skill of a player to an objective third party.

[0008] In general, when a player is close to points required for *dan*/*kyu* rank promotion or demotion, will have a high level of skill at the *dan*/*kyu* rank to which currently belongs (*dan*/*kyu* promotion will be possible due to the high level), but the skill at the *dan*/*kyu* rank that is one higher will be low (due to the difference in skill immediately after *dan*/*kyu*) rank promotion relative to people who have been at the *dan*/*kyu* rank for a long time). When this occurs, the skill level will not be at the level of the *dan*/*kyu* rank that is one level above, in spite of the increase in *dan*/*kyu* rank, and so will tend to lose and immediately undergo a decrease in *dan*/*kyu* rank. Accordingly, will frequently rise above and fall below the *dan*/*kyu* rank promotion and demotion point. According to the conventional criteria described above, when this occurs, handicaps will be assigned and removed because will tend to rise above and fall below the *dan*/*kyu*) rank promotion and demotion point, resulting in loss of usability in this regard.

[Means for Solving the Problems]

[0009] Thus, the inventors of the present invention have developed a go playing system whereby the *dan*/*kyu* promotion point and *dan*/*kyu* demotion point for the players are not the same but by providing this difference, rapid changes in *dan*/*kyu* rank will not occur.

[0010] In addition, a go playing system was developed

in which, in this type of go playing system, the points subsequent to a win or loss are calculated by adjusting the points to be added or subtracted for a win or loss in accordance with the *dan*/*kyu* rank of a player.

[0011] Furthermore, a go playing system was developed in which, when the number of games is small, a difference is provided in the reflection of the points to be added or subtracted for a win or loss, and the number of points subsequent to a win or loss is calculated on this basis.

[0012] The invention according to a first aspect is a go playing system in which playing of go is carried out via a network between a first player terminal used by a first player and a second player terminal used by a second player, the go playing system comprising: player information storage means for storing a *dan*/*kyu* rank and a current point of each player; *dan*/*kyu* rank information storage means for storing a *dan*/*kyu* promotion point and *a dan*/*kyu* demotion point for each *dan*/*kyu* rank, the *dan*/*kyu* demotion point being lower than the *dan*/*kyu* promotion point for the same *dan*/*kyu* rank by prescribed points; play processing means for carrying out go play processing between the first player terminal and the second player terminal via the network; point computing processing means for computing, based on present base point, how much the points of the first player and the second player will change as a result of winning or losing of the game; point reporting processing means for reporting the changes in points due to the winning or losing and calculated by the point computing processing means to the first player terminal and second player terminal; point updating processing means for carrying out computation processing, using the points computed by the point computation processing means, on the current points of the first player and the second player in accordance with the wining or losing of the game in the game processing means, thereby storing as new points in the player information storage means; and *dan*/*kyu* rank updating processing means for retrieving, from the *dan*/*kyu* rank information storage means, the *dan*/*kyu* promotion point for the next higher *dan*/*kyu* rank than the *dan*/*kyu* rank of a winner of the game and the *dan*/*kyu* demotion point of the *dan*/*kyu* rank of a loser of the game, comparing the retrieved *dan*/*kyu* promotion point with the updated point of the winner, thereby updating the *dan*/*kyu* rank of the winner to the next higher *dan*/*kyu* rank and storing in the player information storage means if the updated point satisfies a *dan*/*kyu* promotion standard, and comparing the retrieved *dan*/*kyu* demotion point with the updated point of the loser, thereby updating the *dan*/*kyu* rank of the loser to the next lower *dan*/*kyu* rank and storing in the player information storage means if the updated point satisfies the *dan*/*kyu* demotion standard.

[0013] According to the present invention, it is possible to prevent situations in which a player who has just increased in *dan*/*kyu* ranking is immediately decreased in *dan* /*kyu* ranking by means of a go playing system configuration in which the promotion point and demotion point are set so as to have a gap. In other words, a player that is near the *dan*/*kyu* promotion or demotion point will have a high level of skill at the *dan*/*kyu* rank to which the player currently belongs (*dan*/*kyu* promotion is possible due to the high level), but the skill at the *dan*/*kyu* rank that is one higher will be low (due to the difference in skill immediately after *dan*/*kyu* rank promotion relative to people who have been at the *dank*/*kyu* rank for a long time). When this occurs, in spite of the increase in *dan*/*kyul* rank, the player will tend to lose and immediately undergo a decrease in *dan*/*kyu* rank. Accordingly, the player will frequently rise above and fall below the *dan*/*kyu* rank promotion and demotion point.

[0014] In go, because the *dan*/*kyu* rank directly results in a handicap as described above, it is undesirable for the *dan*/*kyu* rank to frequently rise and fall. However, with the configuration of the present invention, there is no *dan*/*kyu* rank demotion immediately after *dan*/*kyu* rank promotion, and the usability thereof is thus increased.

[0015] The invention according to a second aspect is a go playing system in which playing of go is carried out via a network between a first player terminal used by a first player and a second player terminal used by a second player, the go playing system comprising: player information storage means for storing a *dan*/*kyu* rank and a current point of each player; *dan*/*kyu* rank information storage means for storing a *dan*/*kyu* promotion point and *a dan*/*kyu* demotion point for each *dan*/*kyu* rank, the *dan*/*kyu* demotion point being lower than the *dan*/*kyu* promotion point for the same *dan*/*kyu* rank by prescribed points; play processing means for carrying out go play processing between the first player terminal and the second player terminal via the network; point computing processing means for computing, based on present base point, how much the points of the first player and the second player will increase or decrease as a result of winning or losing of the game; point reporting processing means for reporting the increase or decrease in points due to the wining or losing and calculated by the point computing processing means to the first player terminal and the second player terminal; point updating processing means for adding or subtracting the points computed by the point computation processing means to the current point of the first player and the second player in accordance with the wining or losing of the game in the game processing means, thereby storing as new points in the player information storage means; *dan*/*kyu* rank updating processing means for retrieving, from the *dan*/*kyu* rank information storage means, the *dan*/*kyu* promotion point for the next higher *dan*/*kyu* rank than the *dan*/*kyu* rank of a winner of the game and the *dan*/*kyu* demotion point of the *dan*/*kyu* rank of a loser of the game, comparing the retrieved *dan*/*kyu* promotion point with the updated point of the winner, thereby updating the *dan*/*kyu* rank of the winner to the next higher *dan*/*kyu* rank and storing in the player information storage means if the updated point is equal to or larger than the *dan*/*kyu* promotion point, and comparing the retrieved *dan*/*kyu* demotion point with the

updated point of the loser, thereby updating the *dan*/*kyu* rank of the loser to the next lower *dan*/*kyu* rank and storing in the player information storage means if the updated point is equal to or smaller than the *dan*/*kyu* demotion point; and *dan*/*kyu* rank reporting processing means for reporting, to the player terminal used by the player, when the *dan*/*kyu* rank was updated by the *dan*/*kyu* rank updating processing means, that the *dan*/*kyu* rank has been updated.

[0016] The invention according to the first aspect can also be configured according to this aspect. With such a configuration, similar effects as with the invention according to the first aspect can be achieved.

[0017] The invention of according to a third aspect is a go playing system wherein the point computing processing means: retrieves from the player information storage means the *dan*/*kyu* ranks and the current points of the first player and the second player; compares the *dan*/*kyu* ranks of the first player and the second player; when the *dan*/*kyu* ranks are the same, adds the base point to the current point, thereby computing points for events where the first player and the second player win, and subtracts the base point from the current point, thereby computing points for events where the first player and the second player lose; and, when the *dan*/*kyu* ranks are different, adds, to the current point, points which are obtained by subtracting, from the base point, points corresponding to a present adjustment factor, thereby computing a point for an event where the player with a higher ranking among the players wins, adds, to the current point, points which are obtained by adding, to the base point, points corresponding to the adjustment factor, thereby computing a point for an event where the player with a lower ranking among the players wins, subtracts, from the current point, points which are obtained by adding, to the base point, points corresponding to the adjustment factor, thereby computing a point for an event where the player with a higher ranking among the players loses, and subtracts, from the base point, points which are obtained by subtracting, from the current point, points corresponding to the adjustment factor, thereby computing a point for an event where the player with a lower ranking among the players loses.

[0018] When there is a *dan*/*kyu* rank between players, normally a handicap referred to as an *okigo* is provided, but this [handicap] need not be provided. Thus, when a handicap is not provided, there is a difference in skill level between the players, so directly increasing or decreasing the points is undesirable. Thus, as described in the present invention, points can combined with an adjustment factor, thereby improving usability.

[0019] The invention according to a fourth aspect is a go playing system wherein the base point is set in plurality in accordance with a number of games of the players; the player information storage means further stores the number of games of the players; and the point computation processing means retrieves, when computing the point, the number of games of the first player and the second player from the player information storage means, thereby computing the point using a base point in accordance with the number of games.

[0020] According to this invention, a configuration may be used in which the base point also change in accordance with the number of games. This is because the points may be more accurately reflected in cases where there have been few games.

[0021] The invention according to a fifth aspect is a go playing system wherein a computation processing, by the point computation processing means, for an increase or decrease in a point due to wining or losing and a reporting processing, by the point reporting processing means, to each of the player terminals are carried out prior to a play by the first player and the second player.

[0022] By reporting the win or loss points prior to the game, a feeling of tension and expectation can be imparted to the players, thereby improving enjoyment.

[Effect of the Invention]

[0023] The go playing system of the present invention can improve usability by preventing frequent increases and decreases in *dan*/*kyu* ranking, because the point of a player will not frequently increase and decrease in a short period of time across the *dan*/*kyu* promotion and demotion points.

[0024] Thus, a playing system is produced that is provided with the characteristics of a go game that is handicapped using the *dan*/*kyu* ranks, allowing enjoyment of the game to be increased relative to the past.

BRIEF DESCRIPTION OF THE DRAWINGS

[0025]

FIG. 1 is a diagram showing an example of the system configuration of the go playing system of the present invention;

FIG. 2 is a diagram showing the hardware configuration of the computer terminal where the go playing system is run;

FIG. 3 is a flowchart showing an example of the processing sequence of the present invention;

FIG. 4 is a flowchart showing an example of the processing sequence of the present invention;

FIG. 5 is a schematic view of the player information storing means;

FIG. 6 is a schematic view of the *dan*/*kyu* rank information storage means;

FIG. 7 is an example of a screen that is displayed subsequent to log-in;

FIG. 8 is an example of a screen showing a listing of players that have accessed the playing system;

FIG. 9 is an example of a screen that is displayed to the opposing player;

FIG. 10 is an example of a screen that is displayed when an opposing player has refused a game after

the game has been requested;
FIG. 11 is an example of the go playing screen;
FIG. 12 is an example of a prior report screen;
FIG. 13 is a schematic view showing the difference in *dan* promotion and demotion point;
FIG. 14 is a schematic view showing adjustment factors;
FIG. 15 is a schematic view of the base point when there have been few games; and
FIG. 16 is a schematic view showing a conventional system in which the *dan* promotion and demotion point are the same.

Description of Symbols:

[0026]

1	GO PLAYING SYSTEM
2	PLAY PROCESSING MEANS
3	POINT COMPUTATION PROCESSING MEANS
4	POINT REPORTING PROCESSING MEANS
5	POINT UPDATING PROCESSING MEANS
6	*DANIKYU* RANK UPDATING PROCESSING MEANS
7	*DANIKYU* RANK REPORTING PROCESSING MEANS
8	PLAYER INFORMATION STORAGE MEANS
9	*DANIKYU* RANK INFORMATION STORAGE MEANS
10	PLAYER TERMINAL
11	NETWORK
20	INPUT DEVICE
21	OUTPUT DEVICE
22	COMMUNICATION DEVICE
23	COMPUTATION PROCESSING DEVICE
24	STORAGE DEVICE

BEST MODE FOR CARRYING OUT THE INVENTION

[0027] An example of the system configuration for a go playing system 1 of the present invention ("playing system 1" below) is shown in FIGS. 1 and 2. FIG. 1 is a diagram that shows the schematic functions of the playing system 1, and FIG. 2 is a diagram of the hardware configuration of a computer terminal on which the playing system 1 is run.

[0028] The playing system 1 functions via computer terminals that can send and receive data via a network 11 and a computer terminal that is used by each player. The computer terminal that runs the playing system 1 is preferably, but not necessarily, a server. The server can also be contained in the computer terminal in this specification. The computer terminal, as shown in FIG. 2, has an input device 20, an output device 21, a communication device 22, a computational processing device 23, and a storage device 24.

[0029] A keyboard, mouse, or the like whereby data is input to the computer terminal is an example of the input deice 20. A display, printer, speaker, or other output device 21 that displays the results of the computational processing of the computer terminal may be cited as an example of the output device 21. The communication device 22 is a device that transmits and receives data between player terminals 10 via a network 11; and the computational processing device 23 is a device that runs the program's computational processing, examples of which are a CPU, register, and the like. The storage device 24 is a device that stores the data used by the program or the program itself, and examples include RAM, a hard disk, a magnetic disk, an optical disk, and a magneto-optical disk.

[0030] The computational processes of each of the means shown in FIG. 1 are performed by the computational processing means 23 when the program (go playing program) that runs the playing system 1 of the present invention is read into the computational processing device 23, and the playing system 1 of the present invention is run on the computer terminals. In addition, the data for each of the storage means used by the playing system 1 is stored in the memory device 24 in various storage formats such as databases or data files.

[0031] The playing system 1 has a play processing means 2, a point computation processing means 3, a point reporting processing means 4, a point updating processing means 5, a *dan*/*kyu* rank updating processing means 6, a *dan*/*kyu* rank reporting processing means 7, a player information storage means 8, and a *dan*/*kyu* rank information storage means 9.

[0032] The play processing means 2 is a means whereby playing of the go game by the players is executed. Specifically, a log-in to the playing system 1 is controlled by each of the player terminals 10, and a play request is received from the player terminal 10 (player terminal 10 of player A) and sent to the player terminal 10 of the opponent (player terminal 10 of player B). When a game acceptance notification is received from the player terminal 10 of player B, the results are also sent to the player terminal 10 of player A, and go play processing is carried out via the network 11 between the player terminals 10 of player B and player A. When a game refusal notification is received from the player terminal 10 of player B, the results are sent to the player terminal 10 of player A.

[0033] Go play processing can be carried out using the go playing system 1 via a common known network 11. Information from the receiver is received from one player terminal 10 and is sent to the player terminal 10 of the opponent, and goes play thus occurs via the network 11, with the moves of the players reflected on a virtual go board.

[0034] The point computation processing means 3 is a means for computing the amount in which the points are to increase or decrease when a player is playing against an opponent. Computation of points depends on the number of previous games of the first player and the second player. For example, if the number of previous

games is 1 to 50, the points will increase or decrease by 150 points; if the number of games is 51 to 100, the points will increase or decrease by 120 points; and if there are 101 or more games, then the points will increase or decrease by 100 points. In other words, the prescribed points are added to the point prior to the game in accordance with the number of games if the game is won, and the prescribed points are subtracted from the point prior to the game in accordance with the number of games if the game is lost. When there are few games, such as, for example, 1 to 20, there will be cases where strength is not evaluated appropriately, and computation may therefore be carried out by a computational formula other than adding and subtracting the prescribed number of point.

[0035] The above points are used for a case in which the opponent has the same *dan*/*kyu* rank, but there are also cases where the *dan*/*kyu* rank of the opponent is different. In cases where handicapping such as *okigo* is not carried out, the points to be added or subtracted can be additionally adjusted. For example, when there is no difference in *dan*/*kyu* rank, the adjustment factor is ± 0% (no adjustment), when the *dan*/*kyu* rank difference is 1 *dan*/*kyu,* the adjustment factor is ± 16%, when the *dan*/*kyu* rank difference is two *dan*/*kyu,* the adjustment factor is ± 28%, and when the *dan*/*kyu* rank difference is 3 *dan*/*kyu,* the adjustment factor is ± 36%, where the points are multiplied by the adjustment factor. The adjustment factor is negative when the upper-level player defeats the lower-level player, and multiplying the original points (base point) by a percentage determined by subtracting the prescribed adjustment factor. When the lower-level player defeats the upper-level player, the adjustment factor is positive, and multiplying the original point (base point) by a percentage produced by adding the prescribed adjustment factor.

[0036] For example, when the *dan*/*kyu* rank difference is one *dan* and the number of games of both of the opponents is 101 or greater, 116 points (100 x (1 +0.16)) is added to the lower-ranked player if the lower-ranked player defeats the upper-ranked player (for the losing upper-ranked player, the prescribed 100 points may subtracted without modification, or 116 points, which are obtained by multiplication of 100 points by the adjustment factor of 16%, may be subtracted). In addition, when the *dan*/*kyu* rank difference is 2 *dan* and the number of games of both opponents is 101 or greater, 72 points (100 x (1-02.8)) is added to the upper-level player if the upper-ranked player defeats the lower-ranked player (for the losing lower-ranked player, the prescribed 100 points may be subtracted without modification, or 72 points, which are obtained by multiplication of 100 points by the adjustment factor of 28%, may be subtracted). A schematic view of adjustment factors is shown in FIG. 14.

[0037] By changing the points that are to be added or subtracted in accordance with the *dan*/*kyu* rank difference, a feeling of mutual anxiety will be provided, even when there is a difference in *dan*/*kyu* rank. The point that is used as the basis for changes in accordance with this adjustment factor (base point) are set beforehand by the manager that manages the playing system 1, and are stored in the storage device 24. The manager performs the settings by inputting them from the input device 20.

[0038] The point reporting processing means 4 is a means for receiving the points to be added or subtracted, as calculated by the point computation processing means 3, when a player has played an opponent, receiving the *dan*/*kyu* promotion point and *dan*/*kyu* demotion point of the players from the point computation processing means 3, and sending to the player terminals 10 of each of the players. This report may be made prior to playing. This is done because a report prior to playing can bring about an expectant feel in the players. The *dan*/*kyu* promotion point and *dan*/*kyu* demotion point used herein refer to the point that constitutes a basis for *dan*/*kyu* promotion when a player's point is equal to or greater than the specified point, and the *dan*/*kyu* demotion point refers to the point that constitute a basis for *dan*/*kyu* demotion when a player's point is equal to or less than the specified point.

[0039] The point updating processing means 5 is a means for receiving the win and loss results from the playing processing means 2 after play by the two players is completed, increases or decreases each of the players point by the points calculated by the point computation processing means 3 in accordance with the results, and stores in the player information storage means 8 as the new points.

[0040] The *dan*/*kyu* rank updating processing means 6 is a means for receiving the win and loss results from the playing processing means 2 after play by the two player is completed, and collates the players' point that has been updated by the point updating processing means 5 in accordance with the results, as well as the *dan*/*kyu* promotion point and the *dan*/*kyu* demotion point stored in the *dan*/*kyu* rank information storage means 9. If the winning player has surpassed the *dan*/*kyu* promotion point, then the *dan*/*kyu* rank of the player is updated to the new *dan*/*kyu* rank and stored in the player information storage means 8. If the player has fallen below the *dan*/*kyu* demotion point, then the *dan*/*kyu* rank of this player is updated to the new *dan*/*kyu* rank and stored in the player information storage means 8.

[0041] The *dan*/*kyu* rank reporting processing means 7 is a means for receiving the updated results when the *dan*/*kyu* rank of a player has been updated by the *dan*/*kyu* rank updating processing means 6, and sends a report regarding the new *dan*/*kyu* rank to the player terminal 10 of the player.

[0042] The player information storage means 8 stores player attribute data (e.g., name or other identification information, address, contact details, e-mail address, sex, age), *dan*/*kyu* rank, point, number of past games, number of wins, and number of losses. A schematic view of the player information storage means 8 is shown in FIG. 5.

[0043] The *dan*/*kyu* rank information storage means 9

is a means for storing the *dan*/*kyu* promotion point and *dan*/*kyu* demotion point for each *dan*/*kyu* rank. FIG. 6 presents a schematic view of the *dan*/*kyu* rank information storage means 9. The *dan*/*kyu* demotion point is smaller by exactly a prescribed number than the *dan*/*kyu* promotion point for the same *dan*/*kyu* rank. The prescribed point denotes points of two or more units based on the minimum point units (minimum point unit that is the object of computational processing to determine points; one unit when the minimum unit is an integer, or 0.1 unit when the minimum unit extends to one decimal point). Accordingly, the *dan*/*kyu* promotion point is *dan*/*kyu* demotion point is set so that they are not at the same point or at adjacent point in terms of the minimum unit. When the point is expressed as integers, the *dan*/*kyu* promotion point and *dan*/*kyu* demotion point are separated by two points or more, so that when the *dan*/*kyu* promotion point are 10,000, the *dan*/*kyu* demotion point are 9,998 or below.

[0044] Each of the means in the present invention are only distinguished theoretically based on function, and may occupy the same region in terms of physical or actual. Various types of formats may be used as the data storage format in the storage means, and databases or data files are examples.

[0045] Next, an example of the processing sequence of the playing system 1 of the present invention is described using the flowcharts of FIGS. 3 and 4 and the system configuration diagrams of FIGS. 1 and 2. This example shows a case in which player A and player B are playing, and the conditions shown in FIG. 5 describe the players. In this example, a case is described in which each of the players has a *dan* ranking, but the process is run in the same manner for *kyu* rankings. The processes indicated by the broken lines in the flowcharts of FIGS. 3 and 4 denote alternative processes either one of which is carried out.

[0046] Player A and player B perform the prescribed operations from the respective player terminals 10, accessing the playing system 1 via the network 11 and inputting IDs, passwords, and other such identification data in order to send log-in requests. At this time, the identification data is sent from each of the player terminals 10.

[0047] The player processing means 2 that has received the log-in requests and identification data via the communication device 22 collates the received identification data and the identification data stored in the player information storage means 8, and log-in is allowed when there is a match. When there is no match, instructions to re-enter are sent. In this manner, each of the players logs in (S100, S110).

[0048] At each of the player terminals 10, a screen of the type shown in FIG. 7 is displayed after logging into the playing system 1, and, by selecting "play" therefrom, a table of players that have currently accessed the playing system 1 is displayed. This screen is shown in FIG. 8. The player (player A in this case) selects the opponent that he or she desires to play (player B in this case), and, by pressing the "request" button in FIG. 8, a play request is sent from the player terminal 10A to the playing system 1 via the network 11 (S120).

[0049] The play request from the player terminal 10A is received by the playing processing means 2 via a communication device 22, and the playing processing means 2 sends a notification to the player terminal 10B via the communication device 22 that there is a play request (S130). At this time, the identification data (e.g., handle name) or data such as the *dan*/*kyu* rank and number of prior games for the player A that has made the play request may be retrieved from the player information storage means 8 and sent in combined form. When the play request received from the playing system 1 is received by the player terminal 10B, the specified display shown in FIG. 9 is produced, and the player B thereby ascertains that the request has been made. When the player B has investigated whether or not to accept the request (S150) and presses the "decline" button shown in FIG. 9 in order to decline, notification thereof is then sent from the player terminal 10B via the network 11 to the playing system 1 (S160).

[0050] The playing processing means 2 that has received the "decline" notification sent from the player terminal 10B via the communication device 22 then sends this notification via the communication device 22 to the player terminal 10A of player A that has made the request (S170). When the "decline" notification sent from the playing system 1 is received by the player terminal 10A, the screen shown in FIG. 10 is displayed at the player terminal 10A (S180). The player A thereby ascertains that the play request has been turned down and can search for another player (S190).

[0051] On the other hand, when, as a result of the investigation carried out in S150, the player B accepts the play request and presses the "accept" button in FIG. 9, notification thereof is sent from the player terminal 10B via the network 11 to the playing system 1 (S200).

[0052] The playing processing means 2 that has received the "accept" notification sent from the player terminal 10 via the communication device 22 then sends this notification via the communication device 22 to the player terminal 10A of player A that has made the request (S210). When the "accept" notification sent from the playing system 1 is received by the player terminal 10A, the play screen shown in FIG. 11 is shown at the player terminal 10A (S220). At this time, the play screen shown in FIG. 11 is then shown on the screen of the player terminal 10B as well.

[0053] When the "accept" notification is received by the playing processing means 2 from the player terminal 10B (S210), the point computation processing means 3 computes the amount in which the respective point is to be increased or decreased based on the player information storage means 8 when a win or loss occurs as a result of player A and player B playing (S230).

[0054] Specifically, the *dan*/*kyu* ranks, point, and number of games for player A and player B are first re-

trieved from the player information storage means 8 by the point computation processing means 3. Then, if player A and player B are both at 2 *dan* and the number of games is 101 or greater, the adjustment factor will be ± 0% (no adjustment). Thus, a computation is carried out whereby 100 is added to the current point for player A (26,750) to produce 26,850 points if player A should win, and 100 is subtracted from the current point (26,750) of player A to produce 26650 points if player A should lose; whereas 100 is added to the current point of player B (24,450) to produce 24,550 points if player B should win, and 100 points are subtracted from the current point of player B (24,450) to produce 24,350 points if player B should lose. The points added for a win and the points subtracted for a loss may be the same, but the points may also be different. In addition, 100 points represent an example and are not limiting.

[0055] The point computation processing means 3 retrieves the promotion point for the *dan*/*kyu* rank that is one higher than the current *dan*/*kyu* rank and the demotion point of the current *dan*/*kyu* rank of the player from the *dan*/*kyu* rank information storage means 9, and also computes the number of points required for promotion and the number of points required for demotion. Because player A and player B are both at 2 *dan,* the point computation processing means 3 retrieves the 2 *dan* demotion point (24,400) and the promotion point (26,800) for the *dan*/*kyu* rank (3 *dan*) that is one higher than 2 *dan* from the *dan*/*kyu* rank information storage means 9, compares them with the current point, and performs a computation.

[0056] As a result, for player A, it is computed that there are 50 points to reach the promotion point for 3 *dan* (promotion point for the next higher level minus the current point), and 2350 points to reach the demotion point from 2 *dan* (current point minus the demotion point for the current *dan* rank). Next, an additional comparison is made with the points for winning in S230, and because the point for a win is greater than the promotion point for the next higher *dan* rank (3 *dan*), the point computation processing means 3 determines that a win will bring about a promotion to 3 *dan.*

[0057] For player B, it is computed that there are 2350 points to reach the promotion point for 3 *dan* and 50 points to reach the demotion point from 2 *dan.* A comparison is then made with the point resulting from a loss in S230, and, because the point for a loss are less than the demotion point for the current *dan* rank (2 *dan*), the point computation processing means 3 determines that a loss will bring about a demotion to 1 *dan.*

[0058] The point increase or decrease calculated in this manner by the point computation processing means 3, the current point, the promotion point, the demotion point, and an indication of whether there will be a promotion or demotion are sent by the point reporting processing means 4 via the communication device 22 to each of the player terminals 10 (player terminal 10A and player terminal 10B) (S240). Accordingly, a report is made to the player terminal 10A that there are 26,750 current point, that 100 points are to be added as points for winning, that 100 points are to be subtracted as points for losing, that 26,850 points will result from winning, that 26,650 points will result from losing, that the 3 *dan* promotion point is 26,800, that the 2 *dan* demotion point is 24,4000, and that promotion to 3 *dan* will occur in the case of a win. In addition, a report is made to the player terminal 10B that there is 24,450 current point, that 100 points are to be added as points for winning, that 100 points are to be subtracted as points for losing, that 24,550 points will result from winning, that 24,350 points will result from losing, and that demotion from 2 *dan* will occur in the case of a loss (specifically, demotion to 1 *dan*).

[0059] These reports are received at the player terminal 10A and the player terminal 10B via a network 11 (S250). This notification is displayed on the screen of the player terminal 10A and the player terminal 10B (S260). The screen is shown in FIG. 12. FIG. 12A is the prior notification to player A, and FIG. 12B is the prior notification to player B. In this manner, points resulting from a win or loss and the like are reported prior to playing, so that a feeling of expectation for a promotion or anxiety regarding a demotion can be elicited in the players, thereby enhancing the play.

[0060] After the screen shown in FIG. 12 is displayed at the player terminal 10A and player terminal 10B, player A and player B play a game of go as in the prior art on the playing screen shown in FIG. 11 (S270). Although the playing processing means 2 runs the processes for the game, implementation can also be carried out in a conventional manner.

[0061] Upon completion of the game between player A and player B (S280), the points calculated by the point computation processing means 3 in S230 are added or subtracted with respect to the existing point stored in the player information storage means 8 by the point updating processing means 5, thereby updating [the values] to produce new points (S290). For example, if player A won, then 100 points are added to the points for player A, and thus the point for player A will be updated to 26,850 points by the player information storage means 8 and stored. In this case, player B has lost, and 100 points are therefore subtracted from the point of player B. Accordingly, the point for player B in the player information storage means 8 are updated to 24,350 points and stored.

[0062] On the other hand, if player A has lost, then 100 points are subtracted from the point for player A, and the point for player A in the player information storage means 8 are updated to 26,650 points and stored. In this case, player B wins, and so 100 points are added to the point for player B. Accordingly, the point for player A in the player information storage means 8 are updated to 24,550 and stored.

[0063] When the new point is updated in this manner, the *dan*/*kyu* rank updating processing means 6 collates the updated point stored in the player information storage

means 8 and the *dan*/*kyu* promotion point and *dan*/*kyu* demotion point stored in the *dan*/*kyu* rank information storage means 9 (S300), and determines whether or not there is to be a change in *dan*/*kyu* rank.

[0064] When player A wins, the updated point for player A is 26,850 point. Upon collation with the promotion point to one higher *dan* ranking (3 *dan*) than the current *dan* ranking, the updated point (26,850) is therefore greater than the promotion point for the *dan* ranking that is one higher (26,800). The *dan*/*kyu* rank updating processing means 6 thus determines that player A is to be promoted to 3 *dan.* Accordingly, the *dan*/*kyu* rank updating processing means 6 updates the *dan*/*kyu* rank of player A from 2 *dan* to 3 *dan* in the player information storage means 8. In addition, because player B has lost in this case, the updated point for player B is 24350 points. Upon collating with the demotion point for the current *dan* ranking, the updated point (24,350) is less than the current *dan* ranking demotion point (24,400). The *dan*/*kyu* rank updating processing means 6 thus determines that player B is to be demoted from 2 *dan.* Accordingly, the *dan*/*kyu* rank updating processing means 6 updates the *dan*/*kyu* rank for player B from 2 *dan* to 1 *dan* in the player information storage means 8.

[0065] When player A loses, the updated point for player A is 26,650 point. Upon collating with the demotion point from the current *dan* ranking (2 *dan*), the updated point (26,650) is therefore greater than the demotion point for the current *dan* ranking (24,400). The *dan*/*kyu* rank updating processing means 6 can thus determine that there is to be no change in the ranking for player A. In addition, because player B has won in this case, the updated point for player B is 24550 point. Upon collation with the promotion point for the *dan* ranking that is one higher than the present *dan* ranking (3 *dan*), the updated point (24,550) is less than the promotion point for the next higher *dan* ranking (26,800). The *dan*/*kyu* rank updating processing means 6 can thus determine that there is to be no change in the *dan* ranking for player B.

[0066] For the player that has won, the *dan*/*kyu* rank updating processing means 6 collates the updated point and the promotion point for the next higher *dan* ranking. If the updated point is equal to or greater than the promotion point for the next higher *dan* ranking, the *dan* ranking of the winning player is updated to one higher *dan* ranking, and this is stored in the player information storage means 8. For the losing player, the *dan*/*kyu* rank updating processing means 6 collates the updated point with the demotion point of the current *dan* ranking, and if the updated point is less than (or less than or equal to) the demotion point, then the *dan* ranking of the losing player is updated to the next lower *dan* ranking and stored in the player information storage means 8. In other cases, no updating of the *dan* ranking occurs.

[0067] By providing a gap between the promotion point and demotion point so that the promotion point and demotion point are not the same, the past tendency for the raising and lowering of *dan*/*kyu* rankings can be prevented. In addition, because the difference in *dan*/*kyu* ranking in go has a direct influence on handicapping, the *dan*/*kyu* rankings accurately reflect skill more so than in Japanese or Western chess, which is desirable. In the past, the *dan*/*kyu* rankings tended to increase and decrease because the promotion point and demotion point were the same, making it difficult to accurately assign a handicap. However, because the point is different as described in the present invention, skill is more accurately reflected because demotion will not occur immediately, even when a loss occurs soon after a promotion.

[0068] A schematic view of the present invention in which the promotion point and demotion point are different is shown in FIG. 13.

[0069] When the *dan*/*kyu* rank updating processing means 6 determines the promotion and demotion point in S300 and the updated point are above the promotion point, then the *dan*/*kyu* rank reporting processing means 7 sends a report that the *dan*/*kyu* rank has been updated to the player terminal 10 of the winning player via the communication device 22 (S310, S320). This report is received by the player terminal 10 of the winning player (S330), and the new *dan*/*kyu* rank is displayed on the screen (S340).

[0070] When the *dan*/*kyu* rank updating processing means 6 determines the *dan* promotion point and *dan* demotion point, the *dan*/*kyu* rank reporting processing means 7 sends a report that the *dan*/*kyu* rank has been updated via the communication device 22 to the player terminal 10 of the losing player, whose updated point is below the demotion point (S350, S360). This report is received by the player terminal 10 of the losing player (S370), and the new *dan*/*kyu* rank is displayed on the screen (S380).

[0071] The playing system 1 of the present invention is implemented by the processes described above.

[0072] In the point computation processing means 3 in S230, a case was described in which players were at the same *dan*/*kyu* rank, but the *dan*/*kyu* ranks are different when player A and player C are playing. Accordingly, the adjustment factor shown in FIG. 14 is an element of the computation.

[0073] Specifically, first the point computation processing means 3 retrieves the *dan*/*kyu* rank, point, and number of games for player A and player C from the player information storage means 8. Next, given that player A is 2 *dan* and player C is 4 *dan,* and the number of games for both is 101 or greater, an adjustment factor of $\pm$ 28% is used because the difference in *dan* ranking is two *dan.* Thus, computations are performed whereby, if player A wins, then 128 (100 x (1 +0.28)) is added to the current point for player A (26,750) to produce 26,878 points, whereas if player A loses, then 78 (=100 x (1-0.28)) is subtracted from the current point for player A (26,750) to produce 26,672 points. If player C wins, then 78 (100 x (1-0.28)) is subtracted from the current point for player C (29,500) to produce 29,578 points, whereas if player C loses, then 128 (100 x (1+0.28)) is

subtracted from the current point for player C (29,500) to produce 29,372 points.

[0074] In other words, when the player having a lower *dan* ranking beats the upper player wins, points determined by adding the adjustment factor points to the base point are added to the current point, whereas if the lower player loses to the upper player, the points obtained by subtracting the adjustment factor points from the base point are subtracted from the current point. On the other hand, if the player having a higher *dan* ranking beats the lower player, then points produced by subtracting the adjustment factor points from the base point are added to the current point, whereas if the upper player loses to the lower player, then the points determined by adding the adjustment factor points to the base point are subtracted from the current point.

[0075] Normally, it is highly likely that a player having a higher *dan* ranking will beat a player having a lower *dan* ranking. Thus, by including the adjustment factor, adjustment factor points are added to the base point as a victory bonus if the player with the lower *dan* ranking wins. Even if the player with the lower *dan* ranking loses, as is normally the case, the points are determined by subtracting the adjustment factor from the base point. In addition, because it is normally the case that the person with the higher *dan* ranking will win, the adjustment factor points are subtracted from the base point, whereas if the person with the higher *dan* ranking loses, the adjustment factor points are added to the base point as a penalty. With this type of configuration, it is possible for the game to be played with a feeling of anticipation and anxiety between [the players], even if there is a difference in *dan* ranking.

[0076] When few games have been played, the base point themselves may be increased or decreased as shown in FIG. 15.

[0077] In addition, when an adjustment factor is added in this manner, a handicap *(okigo)* need not be employed, even when there is a difference in *dan* ranking between players. If an *okigo* is to be used, then the handicap can be added to the game from the start, and it is therefore considered unnecessary to adjust the final points of the game.

INDUSTRIAL APPLICABILITY

[0078] The go playing system 1 of the present invention can improve usability by preventing frequent increases and decreases in *dan* ranking, because the point of a player will not frequently increase and decrease in a short period of time between the *dan*/*kyu* promotion and demotion point.

[0079] Thus, a playing system 1 is produced that approximates the characteristics of a game that is handicapped in accordance with *dan*/*kyu* ranks, which allows the enjoyment of the game to be improved relative to the past.

Claims

1. A go playing system in which playing of go is carried out via a network between a first player terminal used by a first player and a second player terminal used by a second player, the go playing system comprising:

   player information storage means for storing a *dan*/*kyu* rank and a current point of each player;
   dan/*kyu* rank information storage means for storing a *dan*/*kyu* promotion point and a *dan*/*kyu* demotion point for each *dan*/*kyu* rank, the *dan*/*kyu* demotion point being lower than the *dan*/*kyu* promotion point for the same *dan*/*kyu* rank by prescribed points;
   play processing means for carrying out go play processing between the first player terminal and the second player terminal via the network;
   point computing processing means for computing, based on present base point, how much the points of the first player and the second player will change as a result of winning or losing of the game;
   point reporting processing means for reporting the changes in points due to the winning or losing and calculated by the point computing processing means the first player terminal and second player terminal;
   point updating processing means for carrying out computation processing, using the points computed by the point computation processing means, on the current points of the first player and the second player in accordance with the wining or losing of the game in the game processing means, thereby storing as new points in the player information storage means; and
   dan/*kyu* rank updating processing means for retrieving, from the *dan*/*kyu* rank information storage means, the *dan*/*kyu* promotion point for the next higher *dan*/*kyu* rank than the *dan*/*kyu* rank of a winner of the game and the *dan*/*kyu* demotion point of the *dan*/*kyu* rank of a loser of the game, comparing the retrieved *dan*/*kyu* promotion point with the updated point of the winner, thereby updating the *dan*/*kyu* rank of the winner to the next higher *dan*/*kyu* rank and storing in the player information storage means if the updated point satisfies a *dan*/*kyu* promotion standard, and comparing the retrieved *dan*/*kyu* demotion point with the updated point of the loser, thereby updating the *dan*/*kyu* rank of the loser to the next lower *dan*/*kyu* rank and storing in the player information storage means if the updated point satisfies the *dan*/*kyu* demotion standard.

2. A go playing system in which playing of go is carried

out via a network between a first player terminal used by a first player and a second player terminal used by a second player, the go playing system comprising:

player information storage means for storing a *dan*/*kyu* rank and a current point of each player;
dan/*kyu* rank information storage means for storing a *dan*/*kyu* promotion point and a *dan*/*kyu* demotion point for each *dan*/*kyu* rank, the *dan*/*kyu* demotion point being lower than the *dan*/*kyu* promotion point for the same *dan*/*kyu* rank by prescribed points;
play processing means for carrying out go play processing between the first player terminal and the second player terminal via the network;
point computing processing means for computing, based on present base point, how much the points of the first player and the second player will increase or decrease as a result of winning or losing of the game;
point reporting processing means for reporting the increase or decrease in points due to the wining or losing and calculated by the point computing processing means to the first player terminal and the second player terminal;
point updating processing means for adding or subtracting the points computed by the point computation processing means to the current point of the first player and the second player in accordance with the wining or losing of the game in the game processing means, thereby storing as new points in the player information storage means;
dan/*kyu* rank updating processing means for retrieving, from the *dan*/*kyu* rank information storage means, the *dan*/*kyu* promotion point for the next higher *dan*/*kyu* rank than the *dan*/*kyu* rank of a winner of the game and the *dan*/*kyu* demotion point of the *dan*/*kyu* rank of a loser of the game, comparing the retrieved *dan*/*kyu* promotion point with the updated point of the winner, thereby updating the *dan*/*kyu* rank of the winner to the next higher *dan*/*kyu* rank and storing in the player information storage means if the updated point is equal to or larger than the *dan*/*kyu* promotion point, and comparing the retrieved *dan*/*kyu* demotion point with the updated point of the loser, thereby updating the *dan*/*kyu* rank of the loser to the next lower *dan*/*kyu* rank and storing in the player information storage means if the updated point is equal to or smaller than the *dan*/*kyu* demotion point; and
dan/*kyu* rank reporting processing means for reporting, to the player terminal used by the player, when the *dan*/*kyu* rank was updated by the *dan*/*kyu* rank updating processing means, that the *dan*/*kyu* rank has been updated.

3. The go playing system according to claim 2, wherein the point computing processing means:

retrieves from the player information storage means the *dan*/*kyu* ranks and the current points of the first player and the second player;
compares the *dan*/*kyu* ranks of the first player and the second player;
when the *dan*/*kyu* ranks are the same, adds the base point to the current point, thereby computing points for events where the first player and the second player win, and subtracts the base point from the current point, thereby computing points for events where the first player and the second player lose; and,
when the *dan*/*kyu* ranks are different, adds, to the current point, points which are obtained by subtracting, from the base point, points corresponding to a present adjustment factor, thereby computing a point for an event where the player with a higher ranking among the players wins, adds, to the current point, points which are obtained by adding, to the base point, points corresponding to the adjustment factor, thereby computing a point for an event where the player with a lower ranking among the players wins, subtracts, from the current point, points which are obtained by adding, to the base point, points corresponding to the adjustment factor, thereby computing a point for an event where the player with a higher ranking among the players loses, and subtracts, from the base point, points which are obtained by subtracting, from the current point, points corresponding to the adjustment factor, thereby computing a point for an event where the player with a lower ranking among the players loses.

4. The go playing system according to claim 3, wherein:

the base point is set in plurality in accordance with a number of games of the players;
the player information storage means further stores the number of games of the players; and
the point computation processing means retrieves, when computing the point, the number of games of the first player and the second player from the player information storage means, thereby computing the point using a base point in accordance with the number of games.

5. The go playing system according to any of claims 2 to 4, wherein a computation processing, by the point computation processing means, for an increase or decrease in a point due to wining or losing and a reporting processing, by the point reporting processing means, to each of the player terminals are carried out prior to a play by the first player and the second player.

FIG. 1

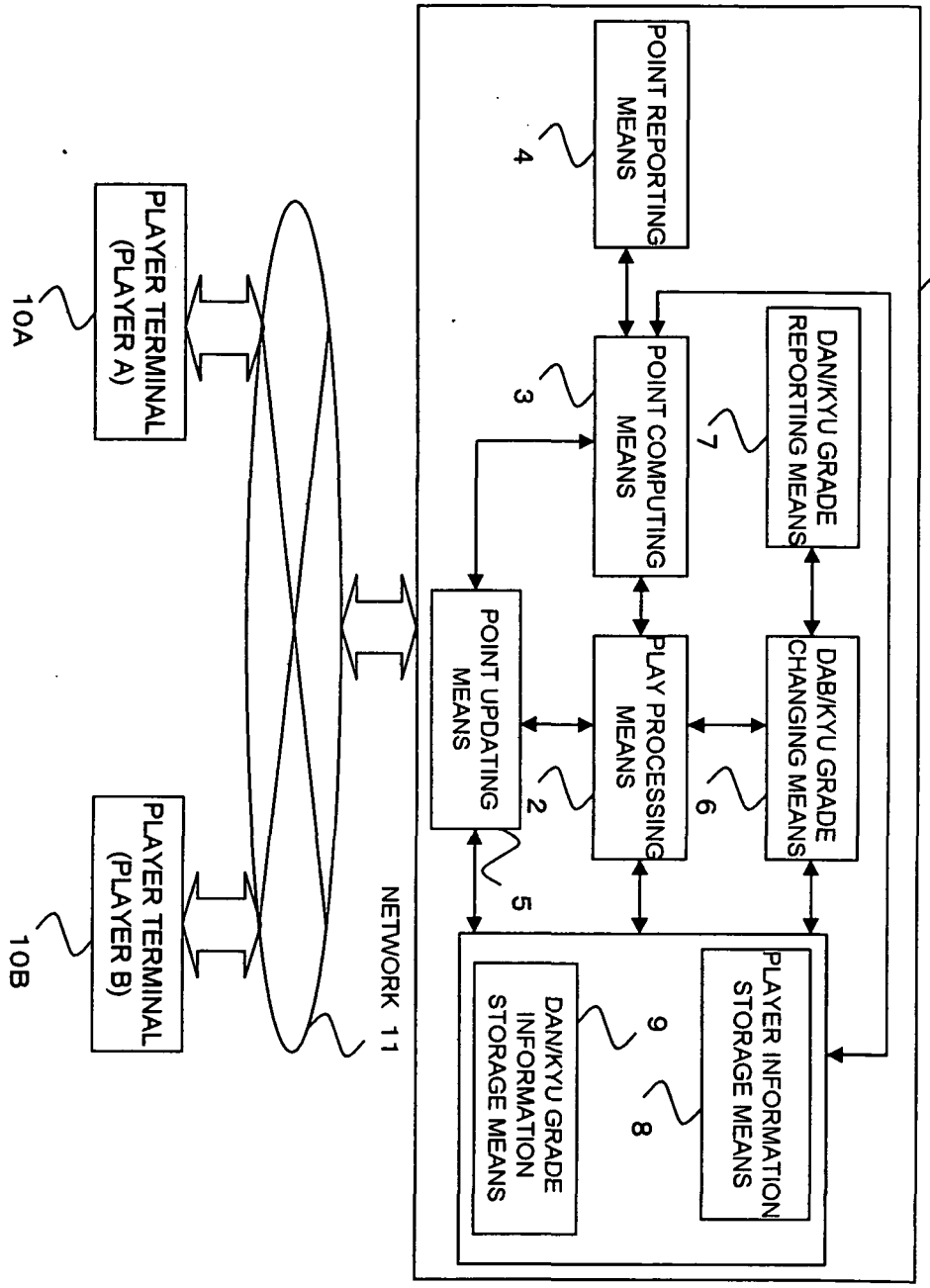

GO PLAYING SYSTEM 1
POINT REPORTING MEANS
4
DAN/KYU GRADE REPORTING MEANS
7
POINT COMPUTING MEANS
3
DAB/KYU GRADE CHANGING MEANS
6
POINT UPDATING MEANS
2
PLAY PROCESSING MEANS
5
PLAYER INFORMATION STORAGE MEANS
8
DAN/KYU GRADE INFORMATION STORAGE MEANS
9
PLAYER TERMINAL (PLAYER A)
10A
PLAYER TERMINAL (PLAYER B)
10B
NETWORK 11

FIG. 2

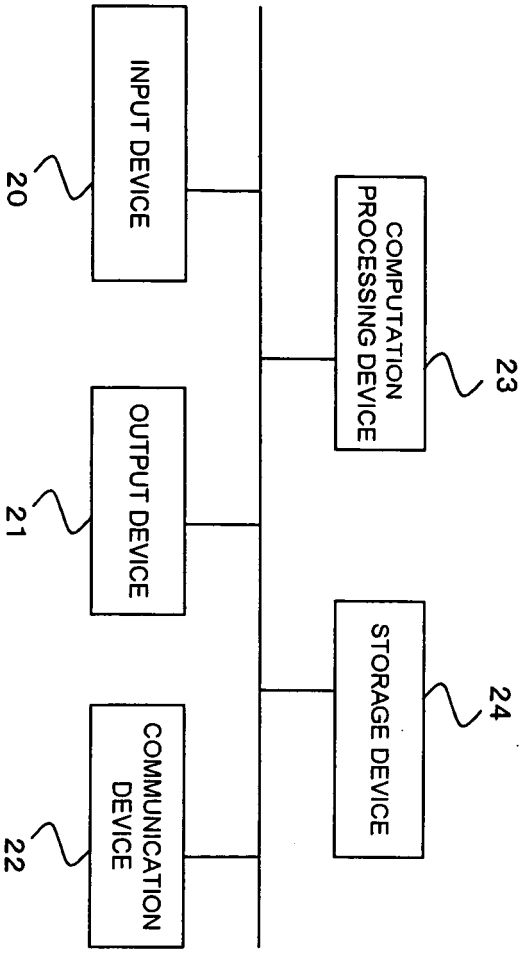

INPUT DEVICE
20
OUTPUT DEVICE
21
COMMUNICATION DEVICE
22
COMPUTATION PROCESSING DEVICE
23
STORAGE DEVICE
24

FIG. 3

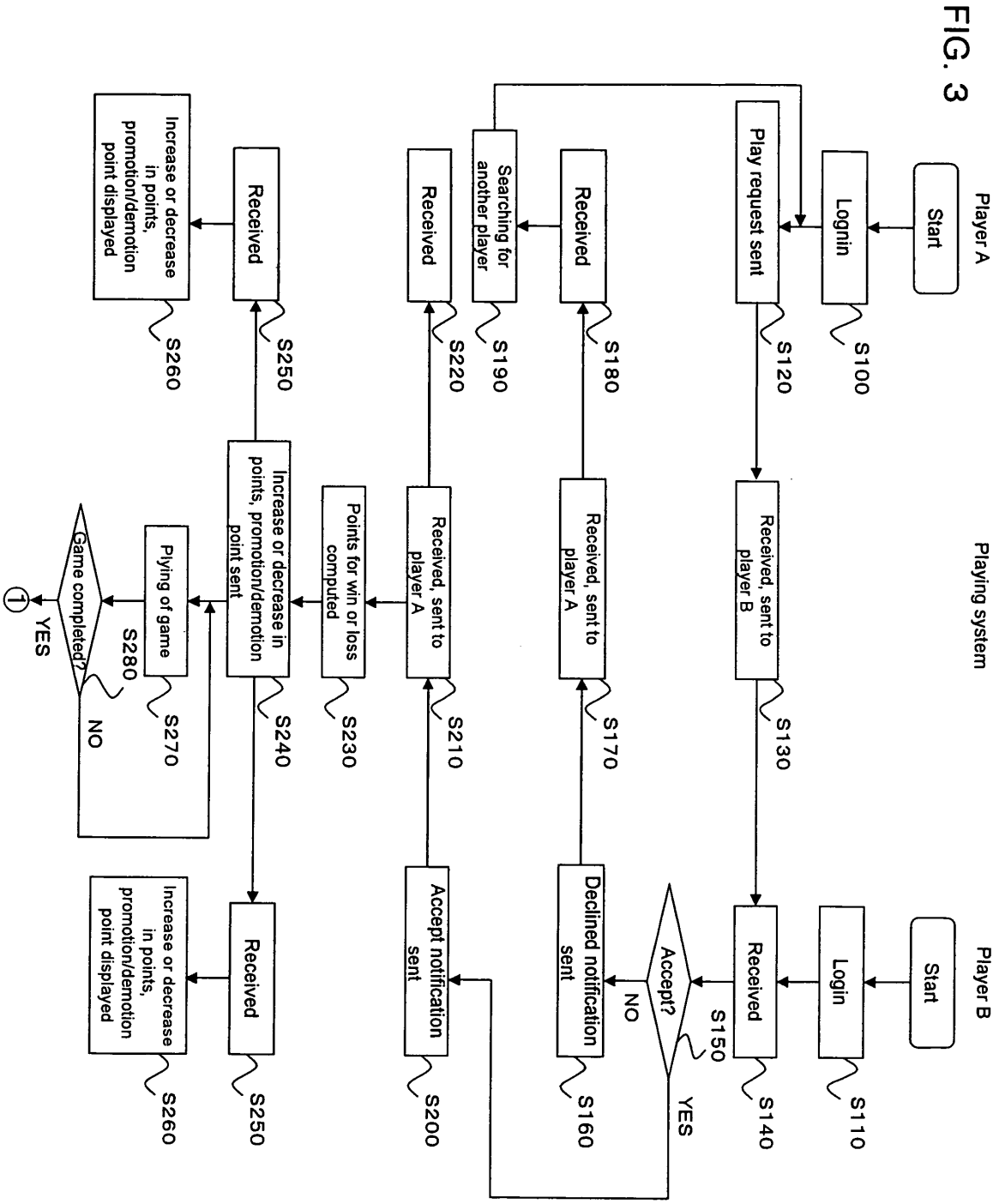

Player A
Playing system
Player B
Start
Login
S100
Login
S110
Play request sent
S120
Received, sent to player B
S130
Received
S140
Accept?
S150
YES
NO
Declined notification sent
S160
Received, sent to player A
S170
Received
S180
Searching for another player
S190
Received
S220
Received, sent to player A
S210
Accept notification sent
S200
Points for win or loss computed
S230
Increase or decrease in points, promotion/demotion point sent
S240
Received
S250
Increase or decrease in points, promotion/demotion point displayed
S260
Plying of game
S270
Game completed?
S280
YES
NO
1
Received
S250
Increase or decrease in points, promotion/demotion point displayed
S260

FIG. 4

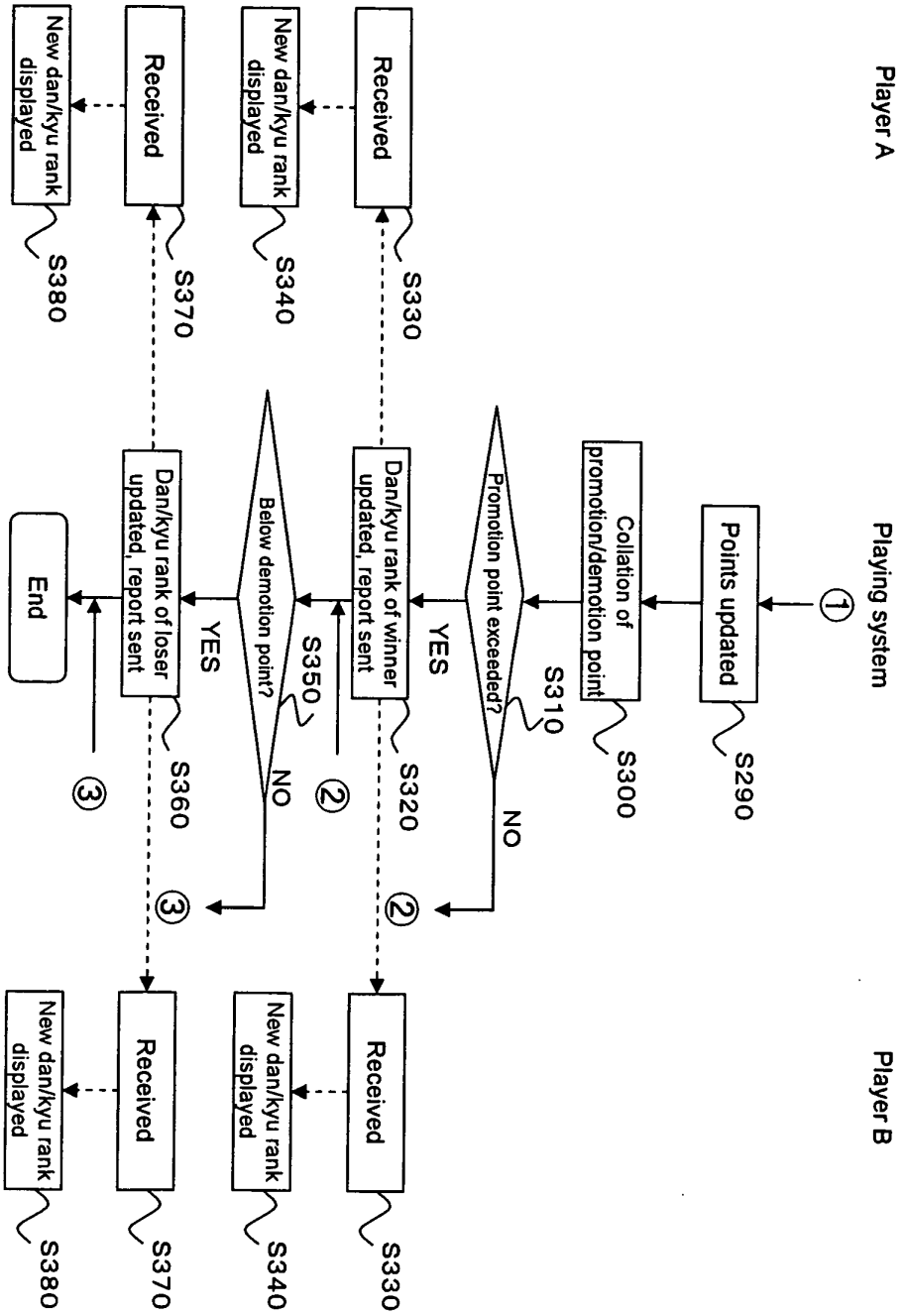

Player A
Playing system
Player B
Points updated
S290
Collation of promotion/demotion point
S300
Promotion point exceeded?
S310
YES
NO
Dan/kyu rank of winner updated, report sent
S320
Below demotion point?
S350
YES
NO
Dan/kyu rank of loser updated, report sent
S360
End
Received
S330
New dan/kyu rank displayed
S340
Received
S370
New dan/kyu rank displayed
S380
Received
S330
New dan/kyu rank displayed
S340
Received
S370
New dan/kyu rank displayed
S380
①
②
③

FIG. 5

Player Identification Information	Attribute	Dan/kyu	Points	Number	ID	Password
Player A	Address, etc.	2 dan	26750	150	A	1
Player B	Address, etc.	2 dan	24450	200	B	2
Player C	Address, etc.	4 dan	29500	300	C	3
.	.	.	.	.	.	.
.	.	.	.	.	.	.
.	.	.	.	.	.	.

FIG. 6

2 Dan	24700	24400
Sho Dan	23000	22800
1 Kyu	21600	21400
2 Kyu	20200	20000
3 Kyu	18800	18600
4 Kyu	17400	17200
5 Kyu	16000	15800
6 Kyu	14800	14600
7 Kyu	13600	13400
8 Kyu	12400	12200
9 Kyu	11200	11000
10 Kyu	10000	9800
11 Kyu	9000	8800
12 Kyu	8000	7800
13 Kyu	7000	6800
14 Kyu	6000	5800
15 Kyu	5000	4900
16 Kyu	4200	4100
17 Kyu	3400	3300
18 Kyu	2600	2500
19 Kyu	1800	1700
20 Kyu	1000	500

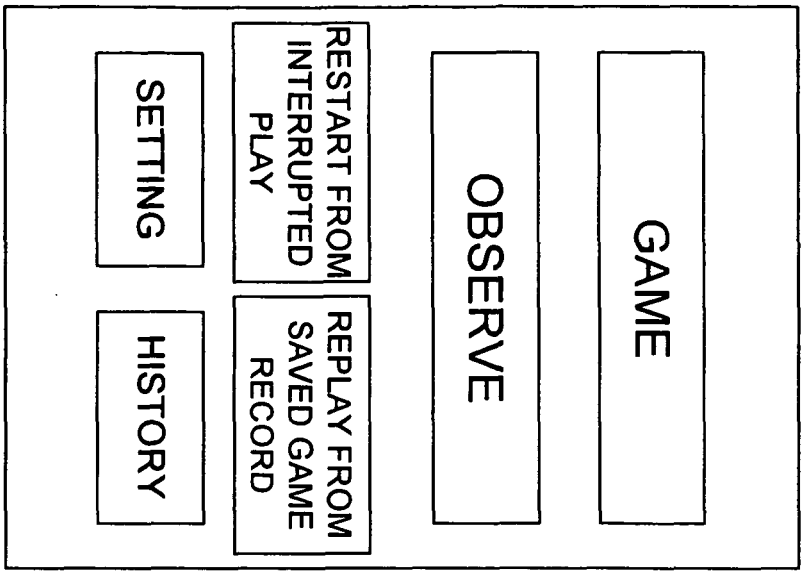

GAME
OBSERVE
RESTART FROM INTERRUPTED PLAY
REPLAY FROM SAVED GAME RECORD
SETTING
HISTORY

FIG. 7

FIG. 8

PLAYERS 533／1941 REQUEST RETURN

Player Identification Information	Country	Dan/Kyu Rank	Wins	Losses	Game Parameters
Player A	Japan	2 dan	○	●	・・・
Player B	Japan	2 dan	△	▲	・・・
Player C	USA	4 dan	□	■	・・・
Player D	China	3 kyu	×	×	・・・
・	・	・	・	・	・
・	・	・	・	・	・
・	・	・	・	・	・

FIG. 9

PLYER A HAS REQUESTED A GAME

2 DAN, ○WINS●LOSSES, JAPAN

ACCEPT DECLINE

FIG. 10

PLAYER B HAS DECLINED THE REQUEST FOR A GAME CLOSE

FIG. 11

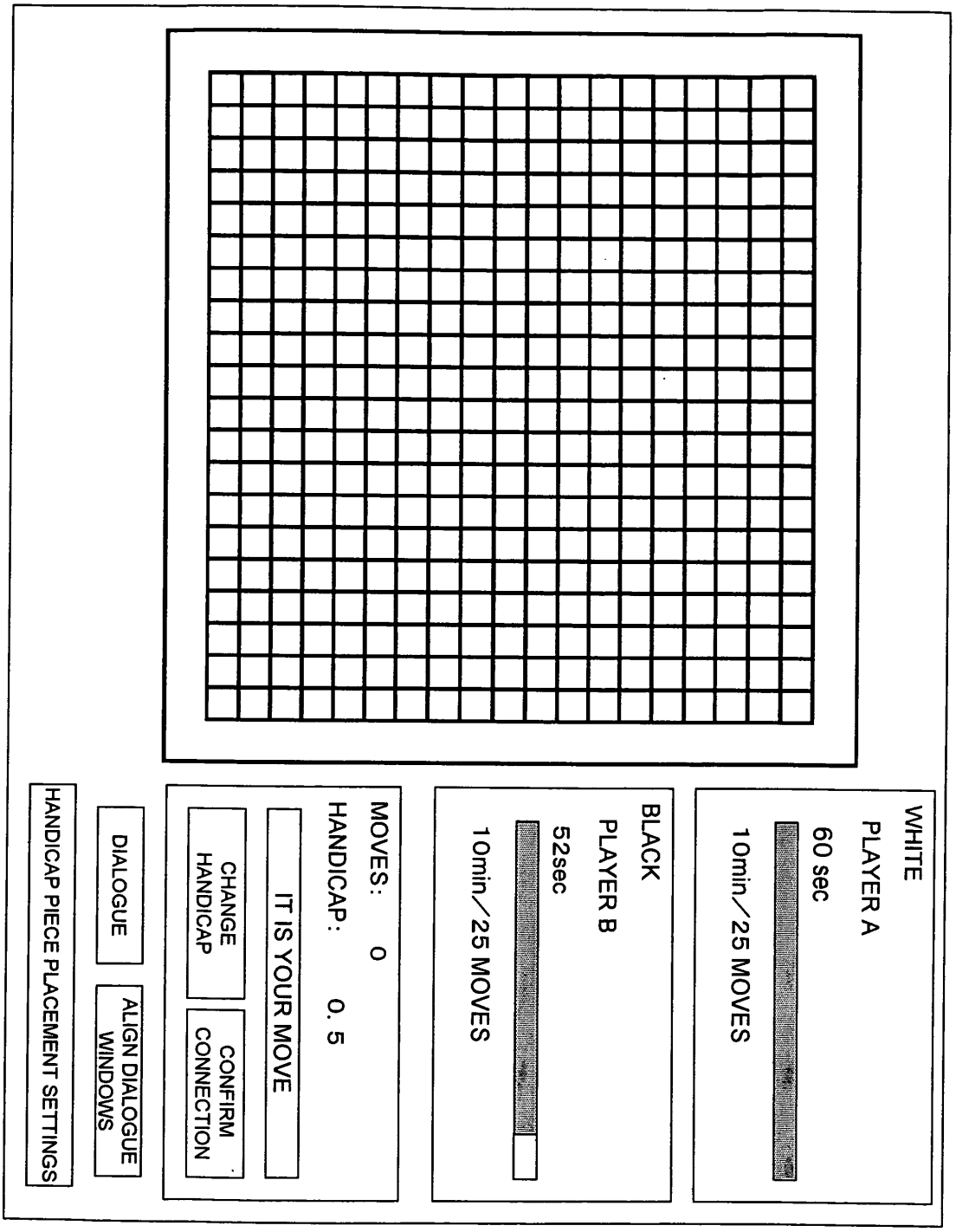
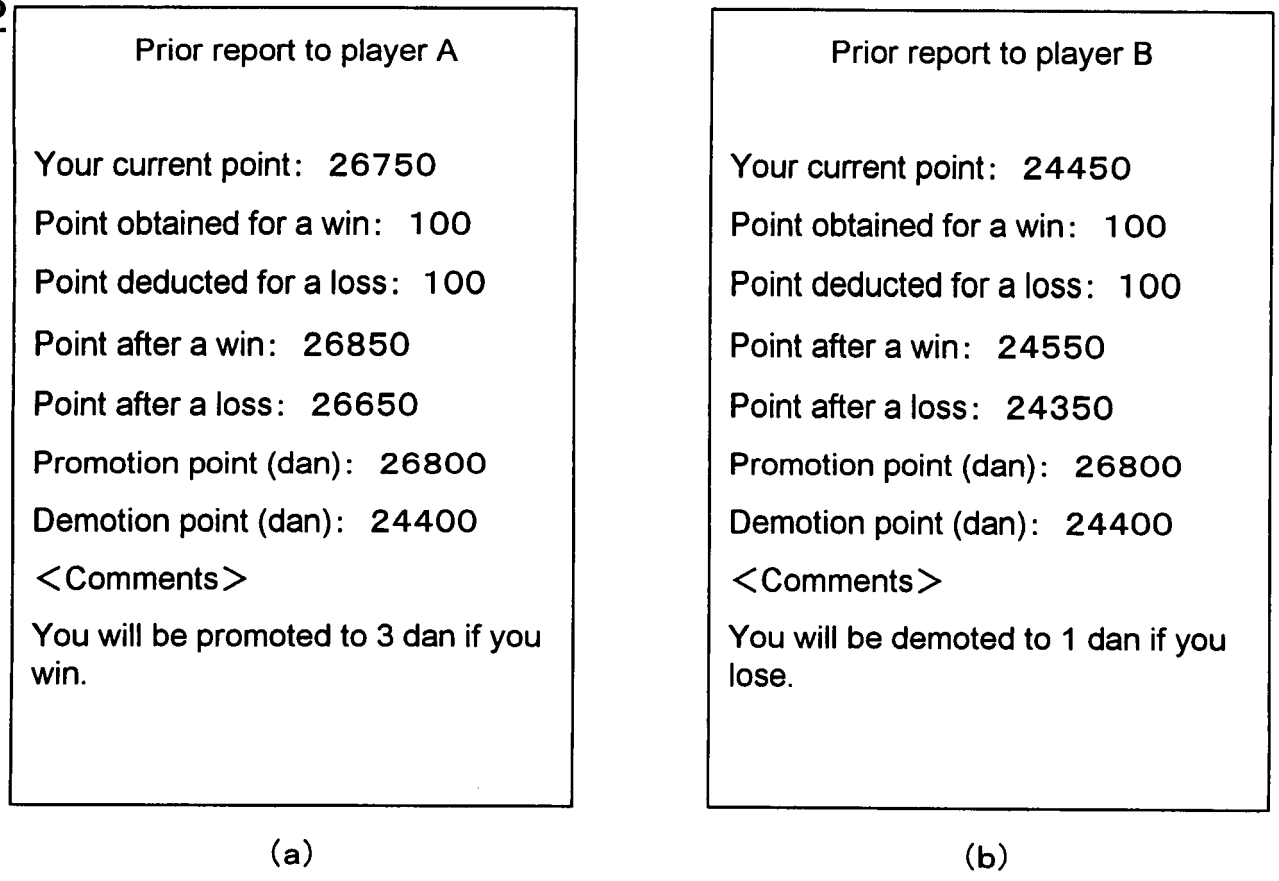

WHITE
PLAYER A
60 sec
10min／25 MOVES
BLACK
PLAYER B
52sec
10min／25 MOVES
MOVES: 0
HANDICAP: 0.5
IT IS YOUR MOVE
CHANGE HANDICAP
CONFIRM CONNECTION
DIALOGUE
ALIGN DIALOGUE WINDOWS
HANDICAP PIECE PLACEMENT SETTINGS

FIG. 12


Prior report to player A
Your current point: 26750
Point obtained for a win: 100
Point deducted for a loss: 100
Point after a win: 26850
Point after a loss: 26650
Promotion point (dan): 26800
Demotion point (dan): 24400
<Comments>
You will be promoted to 3 dan if you win.
Prior report to player B
Your current point: 24450
Point obtained for a win: 100
Point deducted for a loss: 100
Point after a win: 24550
Point after a loss: 24350
Promotion point (dan): 26800
Demotion point (dan): 24400
<Comments>
You will be demoted to 1 dan if you lose.

(a) (b)

FIG. 13

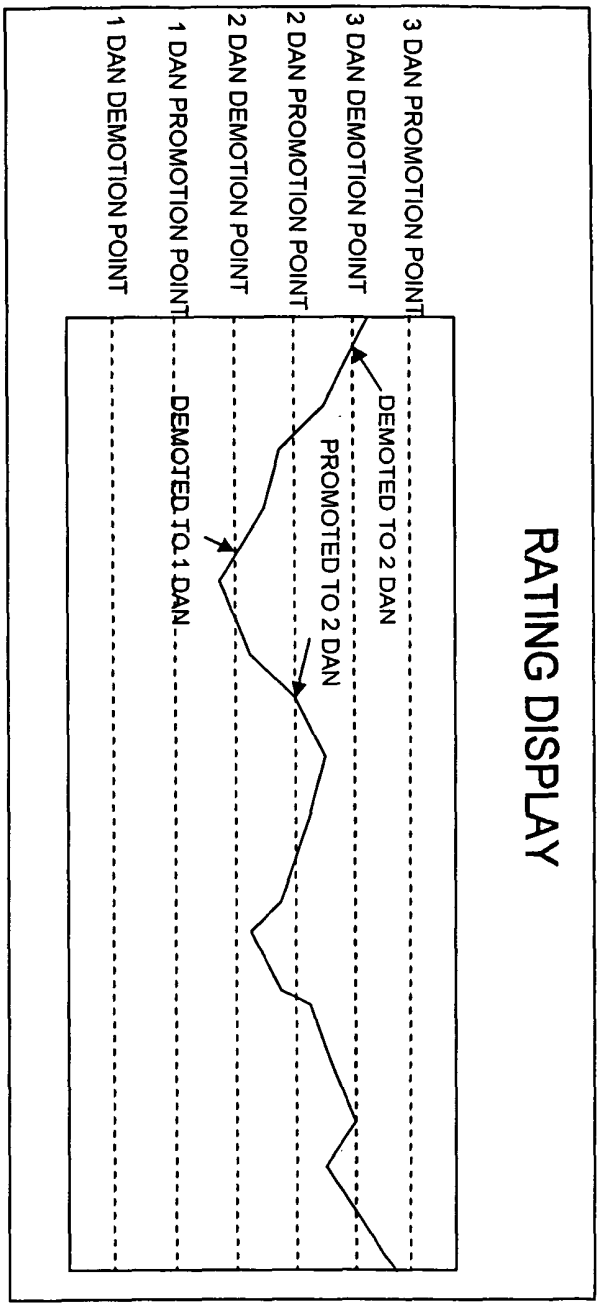


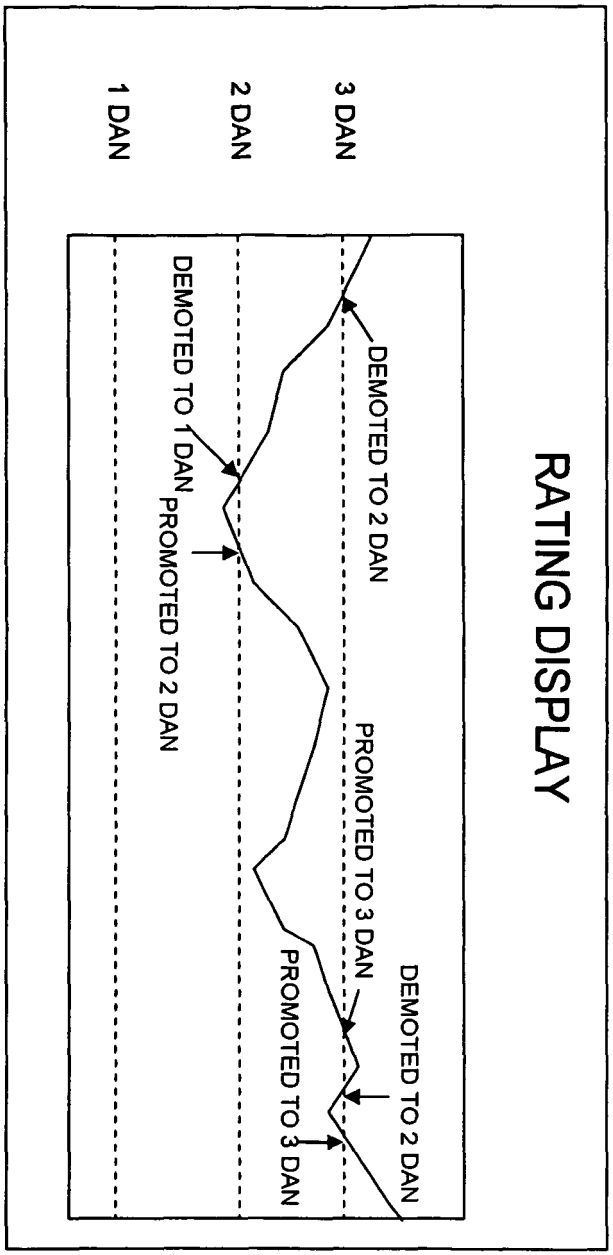
FIG. 14

Dan/kyu rank difference	Adjustment factor
0	±0%
1	±16%
2	±28%
3	±32%
.	.
.	.
.	.

FIG. 15

Number of games	Base point
1 to 50	±150
51 to 100	±120
101 or above	±100

FIG. 16


RATING DISPLAY
3 DAN
2 DAN
1 DAN
DEMOTED TO 2 DAN
PROMOTED TO 3 DAN
DEMOTED TO 2 DAN
PROMOTED TO 3 DAN
DEMOTED TO 1 DAN
PROMOTED TO 2 DAN

INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2005/003317

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl[7] A63F13/12, A63F3/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Int.Cl[7] A63F13/00-13/12, A63F3/02

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Jitsuyo Shinan Koho 1922-1996 Jitsuyo Shinan Toroku Koho 1996-2005
Kokai Jitsuyo Shinan Koho 1971-2005 Toroku Jitsuyo Shinan Koho 1994-2005

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2004-329451 A (Konami Co., Ltd.), 25 November, 2004 (25.11.04), Par. No. [0038]; Fig. 3 & WO 2004/096394 A1	1-5
A	"V Jump Books Game Series Game Boy Advance-ban Hikaru no Go 2 Mezase Puro Kishi!!", 1st Edition, 23 July, 2002 (23.07.02), ISBN:4-08-779185-8, pages 21 to 23	1-5
A	JP 2002-315968 A (Casio Computer Co., Ltd.), 29 October, 2002 (29.10.02), Full text; all drawings (Family: none)	1-5

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
04 April, 2005 (04.04.05)	19 April, 2005 (19.04.05)
Name and mailing address of the ISA/ Japanese Patent Office Facsimile No.	Authorized officer Telephone No.

Form PCT/ISA/210 (second sheet) (January 2004)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2005/003317

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2001-321570 A (Casio Computer Co., Ltd.), 20 November, 2001 (20.11.01), Full text; all drawings (Family: none)	1-5

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REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- JP 2004298234 A **[0005]**
- JP 2004329949 A **[0005]**
- JP 2001321570 A **[0005]**
- JP 2002078843 A **[0005]**
- JP 2002078977 A **[0005]**